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PART II

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Department of the Treasury

Coast Guard

# Vessel Inspection Regulations

# Rules and Regulations

## Title 46—SHIPPING

### Chapter I—Coast Guard, Department of the Treasury

[CGFR 64-19]

### VESSEL INSPECTION REGULATIONS

### Miscellaneous Amendments

Pursuant to the notices of proposed rule making published in the FEDERAL REGISTER of January 30, 1964 (29 F.R. 1572-1586), and February 1, 1964 (29 F.R. 1646), and the Merchant Marine Council Public Hearing Agenda, dated March 23, 1964 (CG-249), the Merchant Marine Council held a public hearing on March 23, 1964, for the purpose of receiving comments, views, and data. The proposals considered were identified as Items I to XVI, inclusive. The public hearing was attended by over 117 persons representing maritime and allied interests. In addition, 531 written comments were submitted. Altogether, over a thousand suggestions for changes in the proposals were received.

The Merchant Marine Council recommendations that final consideration be postponed for certain items pending final action and allowing further written comments to be submitted are approved as follows:

Item I—Bulk dangerous cargoes—those portions pertaining to qualifications for personnel, manning of barges, labelling or placarding of barges in Items Ia, Ib, and Id—for 120 days.

Item VIh—Intrinsically safe equipment and circuits—for 90 days.

Item VIId—Pressure gauge or device on dry chemical extinguishers—for 90 days.

Item X—Lights and fog signals on structures of Outer Continental Shelf and adjacent waters—for 120 days.

Item XII—Implementing 1960 Safety of Life at Sea Convention—postponed indefinitely until actions are taken to place the 1960 Safety of Life at Sea Convention into effect.

Final consideration and actions on the following items have been postponed indefinitely to permit further study and consideration or they are withdrawn:

Item II—Qualified members of engine department rating list and pumpman/tankerman requirements—postponed indefinitely.

Item VIg—Sound-powered telephone and voice tube systems—withdrawn.

Item VIIIa—Hatch covers—withdrawn.

Item IXa—Hot work on waterfront facility or vessels—withdrawn.

Item IXb—Power-operated equipment on waterfront facility—postponed indefinitely.

Item XV—Proper lookout—postponed indefinitely.

The first document, CGFR 64-16, contained amendments based on Items III and XVI regarding stability considerations, subdivision and midsummer seasonal load lines for the Great Lakes. It was published in the FEDERAL REGISTER of April 14, 1964 (29 F.R. 5085).

The second document, CGFR 64-17, contained amendments based on Items IXc and IXd regarding advance notice or arrival of vessels and ammonium nitrate products handled and stored on waterfront facility. It was published in the FEDERAL REGISTER of April 17, 1964 (29 F.R. 5276).

This document is the third of a series regarding the regulations and actions considered in this public hearing and annual session of the Merchant Marine Council. This document contains final actions taken with respect to the following:

#### ITEM I—BULK DANGEROUS CARGOES

a. Tank barges carrying certain bulk inflammable or combustible dangerous cargoes (CG-249, pages 1-7) (partial).

b. Barges carrying certain other bulk dangerous cargoes (CG-249, pages 8-15) (partial).

c. Vessels carrying liquid chlorine in bulk (CG-249, pages 16, 17).

#### ITEM IV—INSPECTION AND CERTIFICATION OF VESSELS

a. Permit to proceed to another port for repairs for tank vessel (CG-249, page 33).

b. Pumprooms on tank vessels (CG-249, page 34).

c. Drydocking requirements for tanks, cargo and miscellaneous vessels (CG-249, pages 35-37).

d. Certificate of inspection amendment for small passenger vessels (CG-249, page 38).

#### ITEM V—MARINE ENGINEERING

a. Fuel oil and cargo oil systems (CG-249, page 39).

b. Means of sounding oil and water tanks (CG-249, page 40).

c. Steering apparatus (CG-249, page 41).

d. Electrical steering and steering control systems (CG-249, pages 47-53).

#### ITEM VI—ELECTRICAL ENGINEERING

a. Electric power-operated watertight doors (CG-249, page 54).

b. Power supplies for electric power-operated watertight doors (CG-249, page 55).

c. Multi-speed motors, overcurrent protection for motors, direct-current exciters, ground detection, and hook-up wire (CG-249, pages 56-61).

d. Receptacle outlets (CG-249, page 62).

e. Feeder and branch circuit cables (CG-249, pages 63, 64).

f. Emergency electrical systems (CG-249, pages 65, 66).

#### ITEM VII—REQUIREMENTS AND SPECIFICATIONS FOR LIFESAVING DEVICES, EXTINGUISHERS, AND BACKFIRE FLAME ARRESTERS

b. Unicellular polyethylene foam buoyant vests (CG-249, pages 87-92).

c. Unicellular polyethylene foam material (CG-249, pages 93-96).

e. Backfire flame control on uninspected vessels (motorboats) (CG-249, pages 98, 99).

#### ITEM XIII—COMBUSTIBLE GAS DETECTORS ON TANK VESSELS

#### ITEM XIV—RENEWAL OF OPERATORS' AND OCEAN OPERATORS' LICENSES—EXERCISE ON RULES OF THE ROAD

The proposals designated Items Ic, IV, VIa, VIb, VId, VIe, VIf, and VIIe in the above list are approved as published in the Agenda (CG-249) and the regulations are set forth in this document. Those proposals designated Items Ia (partial), Ib (partial), V, VIc, VIIb, VIIc, XIII, and XIV, as revised, are approved and set forth in this document.

The proposals in Items Ia and Ib for bulk dangerous cargoes in barges, as well as the corollary proposals for manning, qualifications of personnel, and special operating requirements for such barges, were commented on extensively and indicated a great divergence in views. Therefore, only the proposals regarding barges, constructed or converted on or after July 1, 1964, and for independent tanks in barges are adopted and set forth herein. Changes were made in the proposals designated §§ 32.63-5 and 98.03-7, regarding barge hull classifications; in §§ 32.63-8 and 98.03-8, regarding alternative arrangements; in §§ 32.63-10 and 98.03-15, regarding rakes and coamings; in §§ 32.63-15 and 98.03-20, regarding subdivision and stability; and in §§ 32.63-25(b) and 98.03-30(b), regarding cargo tanks and supports. The portions of the proposals in Item Ia and Ib not acted upon at this time are designated in the Agenda as 46 CFR 32.63-1(b), 35.01-50, 98.03-5(c), 98.03-35, and 98.03-40 (CG-249, pages 3, 6, 7, 10, 13, 14, and 15), and are being studied further. The submission of additional written comments on these proposals is authorized for a period of 120 days.

The proposals regarding oil systems in Items Va and Vb are revised and reflect changes based on comments received. In order to have uniformity in requirements, necessary changes are made in 46 CFR 55.10-35(f), 55.10-65(a), 59.10-1(e), and 182.20-25(a)(5).

The requirements regarding steering apparatus in 46 CFR Subpart 57.25 are reprinted in their entirety due to the many changes therein. Changes were made in the proposals in Items Vc and Vd for §§ 57.25-45(a), 57.25-50(a), 57.25-55(b)(1), and 111.65-55 (a), (c) (2) and (3).

The proposals in Item VIc, regarding electrical engineering, are revised as a result of comments received and changes are made in the proposals designated § 111.05-15(g)(3), regarding ground detection; and § 111.45-5(b)(2), regarding protective devices; while the proposal designated § 111.45-5(n), regarding rating of protective device, was withdrawn.

The proposals in Items VIIb and VIIc, regarding specifications for unicellular polyethylene foam vest, were revised as a result of comments received. Minor changes are made in the proposals designated §§ 160.060–1(b), 160.060–5(b), (c), 160.060–6(b), (c), 160.060–7(e)(2), 160.060–8(b), 164.013–3(c), and 164.013–4(a).

The proposals in Item XIII, regarding combustible gas detectors, were revised in line with comments received and § 35.30–15 was limited to combustible gas indicators for use on United States flag tank vessels and manned barges.

The fourth document, CGFR 64–20, contains amendments based on Item VIII, regarding dangerous cargoes. It was published in the FEDERAL REGISTER of May 23, 1964.

The fifth document, CGFR 64–21, contains amendments based on Item XI, regarding Rules of the Road. It was published in the FEDERAL REGISTER of April 30, 1964 (29 F.R. 5731).

The sixth document, CGFR 64–30, contains amendments based on Item VIIa, regarding special purpose water safety buoyant devices.

The provisions of section 372 of Title 46, U.S. Code, require an uniform administration of the inspection laws, rules and regulations. Various amendments and editorial changes have been included in this document in order that the various requirements will be as uniform as possible. The amendments to 46 CFR Chapter I, which were not described in the notices of proposed rule making published in the FEDERAL REGISTER of January 30 and February 1, 1964 (29 F.R. 1572, 1646), are considered to be revised requirements to agree with existing regulations, or relaxations of previous requirements, or changes in procedures, or changes which are editorial in nature. Therefore, it is found that compliance with the Administrative Procedure Act (respecting notice of proposed rule-making, public rule-making procedures thereon, and effective date requirements thereof) is unnecessary with respect to such changes.

The provisions in § 2.01–13 describe inspection requirements for certain foreign vessels and references to this section are in §§ 30.01–5(f), 70.05–3(c), 90.05–1(b), and 146.02–2(i). In order that the regulations will be in agreement, the word "or" is inserted between the words "construction" and "whose" in the first sentence of the references.

The amendments to 46 CFR 2.01–1(a), 31.01–15(b), 71.20–5, 71.25–5, 91.20–5, 91.25–5, and 167.15–10 bring up to date the form number and title of the application required to be submitted by the owner, operator or agent of a U.S. vessel required to be inspected and certificated by the Coast Guard. The new form CG–3752 (Rev. 9–63) replaces two forms presently used, i.e., Form CG–833, Application for Inspection of Vessel, and Form CG–3752, Application for Inspection of Small Passenger Vessel. The use of existing Form CG–833 or Form CG–3752 (prior edition) may be continued until the present supply has been exhausted. These blank forms are available upon request from the nearest Coast Guard Marine Inspection Office.

The amendment to 46 CFR 10.02–7(e)(1) is to permit the Public Health Service to use pseudoisochromatic plate test in testing an applicant for raise of grade of license as master, mate or pilot, which is in addition to the "Stillings" test or the "Williams" lantern test. When the various regulations governing the physical examinations of applicants for licenses as deck and engineer operators were amended in January 1963 the provisions on color sense for applicants seeking a raise of grade of licenses was overlooked. This amendment will remove an inconsistency in the regulations.

The amendments to 46 CFR 10.05–33(a)(3)(ii), 10.10–21(a)(3)(ii), and 10.10–23(a)(3)(ii), regarding service qualifications for licenses as third mate and third assistant engineer, substitute a reference to "nautical schoolship" approved by the Commandant for a reference to the Act of March 4, 1911, which has been repealed.

Many comments have been made regarding use of the obsolete word "inflammable" in the proposals in Item I, and that it should be changed to "flammable". The fact that the Interstate Commerce Commission's placards no longer use the word "inflammable" was also noted. The Tank Vessel Act (46 U.S.C. 391a) and the Tank Vessel Regulations use the word "inflammable" extensively. Therefore, a definition of the words "flammable" and "inflammable", similar to 46 CFR 146.03–9, is included in this document as a new section designated 46 CFR 30.10–21, and provides that these words are synonymous and may be used interchangeably.

In comparing regulations published in pamphlet form by the Coast Guard and the regulations published in 46 CFR Chapter I, a number of variations were noted. The amendments to 46 CFR 25.15–1(a), 30.10–35, 30.10–36, 32.40–1(a), 33.15–15(a), 33.40–5(a), 35.01–1(d), 35.07–10(b)(7) and (c)(1), 50.10–25, 71.25–20(a)(3), 71.60–1(d), 72.20–90(a)(1), 73.45–10(a), 75.33–15(b), 75.43–90(a)(1), 76.05–25, 76.17–5(b)(1)(i), 76.23–10(b)(1), 78.37–5(a)(2), 91.50–1(b)(2) and (d), and 110.10–1(d) are in effect editorial so that requirements in the Code of Federal Regulations and regulations distributed and followed by the public will be the same.

In the Marine Engineering Regulations are many references to specification standards published by private organizations and generally used by industry. The changes in §§ 51.23–1(a), 51.24–1(a), 51.25–1(a), 51.34–1(a), 51.46–1, 51.49–1, 51.58–1(a), 51.61–1, 52.05–10(a), and 55.07–15(e)(1) are to bring references to specification standards up-to-date.

The amendment to § 167.30–10 provides the same gas free inspection testing for alterations or repairs for nautical schoolships as when making similar alterations or repairs on cargo vessels. This has been an administrative practice for many years. The Maritime Academies were contacted and advised that the administrative practice was to be incorporated into the regulations and no objection was indicated.

The amendment to § 162.028–4(a) provides that future marking of marine type portable fire extinguishers will contain a reference to the applicable Coast Guard specification in 46 CRF Part 162 so that the approval number will be similar to that used on other equipment required to be approved. This change in labelling requirements has been agreed to by the Underwriters Laboratories, Incorporated, and will be furnished in labels supplied specific manufacturers of approved fire extinguishers. The revised marking is desirable from an enforcement standpoint and it will assist the public in identifying approved equipment while the manufacturers should have little if any increased costs requirements. It is not intended nor required to have existing marine type fire extinguishers remarked as approved. Equipment will be accepted so long as it is in good and serviceable condition.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by section 632 of Title 14, U.S. Code, and Treasury Department Order 120, dated July 31, 1950 (15 F.R. 6521), and others specifically listed with the regulations below, the following actions are ordered:

1. The vessel inspection regulations shall be amended in accordance with the changes in this document.

2. The amendments to 46 CFR 32.63–1 to 32.63–25, inclusive, and 98.03–1 to 98.03–30, inclusive, regarding barges carrying certain dangerous bulk cargoes, shall be effective July 1, 1964.

3. The amendment to 46 CFR 162.028–4(a), regarding the marking on the marine type label for portable fire extinguishers, shall be effective January 1, 1965.

4. The new specifications designated 46 CFR 160.060–1 to 160.060–9, inclusive, and 164.013–1 to 164.013–5, inclusive, regarding buoyant vest using unicellular polyethylene, shall be effective on date of publication in the FEDERAL REGISTER.

5. Regulations containing specific effective dates shall become effective on and after such dates.

6. Unless specifically specified otherwise, the regulations in this document shall become effective on and after the 90th day following the date of publication of this document in the FEDERAL REGISTER.

7. The regulations in this document may be complied with during the interim period prior to the effective dates specified in lieu of existing requirements; however, the new or revised requirements in this document shall be met no later than the effective dates specified herein.

## SUBCHAPTER A—PROCEDURES APPLICABLE TO THE PUBLIC

## PART 2—VESSEL INSPECTIONS

### Subpart 2.01—Inspecting and Certificating of Vessels

1. Section 2.01–1(a)(1) is amended to read as follows:

**§ 2.01–1 Applications for inspections.**

(a) *Application forms.* (1) Applications for the inspections of vessels required to be inspected by the Coast

Guard by 46 U.S.C. 362, 363, 367, 390a, 391, 391a, 392, 395, 404, 405, 526, 1333, or 50 U.S.C. 198, shall be made by the master, owner or agent on the following Coast Guard forms which are obtainable from the Officer in Charge, Marine Inspection, at any local Marine Inspection Office, U.S. Coast Guard.

(i) CG–3752—Application for Inspection of U.S. Vessel.

(ii) CG–986—Application for Inspection of Foreign Vessel.

* * * * *

(R.S. 4421, as amended, 4453, as amended; 46 U.S.C. 399, 435; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857)

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SUBCHAPTER B—MERCHANT MARINE OFFICERS AND SEAMEN

## PART 10—LICENSING OF OFFICERS AND MOTORBOAT OPERATORS AND REGISTRATION OF STAFF OFFICERS

### Subpart 10.02—General Requirements for All Deck and Engineer Officers' Licenses

1. Section 10.02–7(e)(1) is amended to read as follows:

**§ 10.02–7 Requirements for raise of grade of licenses.**

* * * * *

(e) *Physical requirements.* (1) No license as master, mate, or pilot shall be raised in grade except upon the official certificate of a medical officer of the United States Public Health Service that the color sense of the applicant is normal. Applications for raise in grade of engineer's licenses shall not be subjected to such examination. In exceptional cases where an applicant would be put to great inconvenience or expense to appear before a medical officer of the United States Public Health Service, the physical examination and certification may be made by another reputable physician. The color sense will be tested by means of a pseudoisochromatic plate test, but any applicant who fails this test will be eligible if he can pass the "Williams" lantern test or equivalent. A person failing the pseudoisochromatic plate test shall, if the Public Health Station at which he is undergoing test is not equipped with a lantern, pay his own expenses to journey to such station as is equipped with same.

* * * * *

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417a, as amended, 4426, as amended, 4427, as amended, 4438, as amended, 4438a, as amended, 4439, as amended, 4440, as amended, 4441, as amended, 4442, as amended, 4443, as amended, 4445, as amended, 4447, as amended, sec. 2, 29 Stat. 188, as amended, sec. 1, 34 Stat. 1411, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 5, 49 Stat. 1935, as amended, sec. 302, 49 Stat. 1992, as amended, sec. 3, 70 Stat. 152, and sec. 3 68 Stat. 675; 46 U.S.C. 391a, 404, 405, 224, 224a, 226, 228, 229, 214, 230, 231, 233, 225, 237, 367, 672a, 1132, 390b, 50 U.S.C. 198. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894)

### Subpart 10.05—Professional Requirements for Deck Officers' Licenses (Inspected Vessels)

2. Section 10.05–33(a)(3)(ii) is amended to read as follows:

**§ 10.05–33 Third mate of ocean steam or motor vessels.**

(a) * * *

(3) * * *

(ii) The deck class of a nautical schoolship approved by and conducted under rules prescribed by the Commandant and listed in Part 166 of Subchapter R (Nautical Schools) of this chapter;

* * * * *

(R.S. 4405, as amended, 4462, as amended, 46 U.S.C. 375, 416. Interpret or apply R.S. 4417a, as amended, 4426, as amended, 4427, as amended, 4438, as amended, 4438a, as amended, 4439, as amended, 4440, as amended, 4442, as amended, 4443, as amended, 4445, as amended, 4447, as amended, sec. 2, 29 Stat. 188, as amended, sec. 1, 34 Stat. 1411, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 70 Stat. 152, and sec. 3, 68 Stat. 675; 46 U.S.C. 391a, 404, 405, 224, 224a, 226, 228, 214, 230, 231, 233, 225, 237, 367, 390b, 50 U.S.C. 198. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894)

### Subpart 10.10—Professional Requirements for Engineer Officers' Licenses (Inspected Vessels)

3. Section 10.10–21(a)(3)(ii) is amended to read as follows:

**§ 10.10–21 Third assistant engineer; steam vessels.**

(a) * * *

(3) * * *

(ii) The engineering class of a nautical schoolship approved by and conducted under rules prescribed by the Commandant and listed in Part 166 of Sub-Subchapter R (Nautical Schools) of this chapter;

* * * * *

4. Section 10.10–23(a)(3)(ii) is amended to read as follows:

**§ 10.10–23 Third assistant engineer; motor vessels.**

(a) * * *

(3) * * *

(ii) The engineering class of a nautical schoolship approved by and conducted under rules prescribed by the Commandant and listed in Part 166 of Subchapter R (Nautical Schools) of this chapter;

* * * * *

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417a, as amended, 4426, as amended, 4427, as amended, 4438, as amended, 4438a, as amended, 4441, as amended, 4443, as amended, 4445, as amended, 4447, as amended, sec. 2, 29 Stat. 188, as amended, sec. 1, 34 Stat. 1411, as amended, secs. 1, 2, 1544, 1545, as amended, sec. 3, 70 Stat. 152, and sec. 3, 68 Stat. 675; 46 U.S.C. 391a, 404, 405, 224, 224a, 229, 230, 231, 233, 225, 237, 367, 390b, 50 U.S.C. 198. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894)

SUBCHAPTER C—UNINSPECTED VESSELS

## PART 25—REQUIREMENTS

### Subpart 25.15—Foghorns

1. Section 25.15–1(a) is amended by changing the phrase "Pilot Rules" to "Rules of the Road", so that it reads as follows:

**§ 25.15–1 Vessels other than motorboats.**

(a) All vessels other than motorboats shall be equipped with an efficient foghorn as prescribed by the Rules of the Road applicable to the waters on which the vessel is navigated. On vessels in ocean or coastwise service, the foghorn shall be sounded by mechanical means.

(R.S. 4405, as amended, 4462, as amended, sec. 17, 54 Stat. 166, as amended; 46 U.S.C. 375, 416, 526p. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–32, Sept. 23, 1958, 23 F.R. 7605)

### Subpart 25.35—Backfire Flame Control

2. The title of Subpart 25.35 is amended to read as set forth above.

3. Section 25.35–1 is amended to read as follows:

**§ 25.35–1 Requirements.**

(a) Every gasoline engine installed in a motorboat or motor vessel after April 25, 1940, except outboard motors, shall be equipped with an efficient means of backfire flame control. Installations made before November 19, 1952, need not meet the detailed requirements of this subpart and may be continued in use as long as they are in good condition.

(b) The following are acceptable means of backfire flame control for gasoline engines:

(1) A backfire flame arrestor constructed in accordance with the specifications contained in Subpart 162.015 of Subchapter Q (Specifications) of this chapter and specifically approved by the Commandant. The flame arrestor shall be suitably secured to the air intake with flame tight connection.

(2) An engine air and fuel intake system which provides adequate protection from propagation of backfire flame to the atmosphere equivalent to that provided by an approved flame arrestor. A gasoline engine which has such an air and fuel intake system and which is to be operated without an approved flame arrestor shall be tested and labeled in accordance with the specifications contained in Subpart 162.015 of Subchapter Q (Specifications) of this chapter and specifically approved by the Commandant.

(3) Any attachment to the carburetor or location of the engine air intake by means of which flames caused by engine backfire will be dispersed to the atmosphere outside the vessel in such a way that the flames will not endanger the vessel or persons on board. All attachments shall be of metallic construction with flame tight connections and firmly secured to withstand vibration, shock and engine backfire. Such installations do not require formal approval but will be accepted by Coast

Guard law enforcement officers on the basis of this subpart.

(R.S. 4405, as amended, 4462, as amended, sec. 17, 54 Stat. 166, as amended; 46 U.S.C. 375, 416, 526p. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–32, Sept. 23, 1958, 23 F.R. 7605)

SUBCHAPTER D—TANK VESSELS

## PART 30—GENERAL PROVISIONS

### Subpart 30.01—Administration

§ 30.01–5 [Amended]

1. In order to have text agree with § 2.01–13, § 30.01–5 *Application of regulations—TB/ALL*, paragraph (f), is amended by inserting after the word "construction" the word "or".

(R.S. 4405, as amended, 4417a, as amended, 4462, as amended; 46 U.S.C. 375, 391a, 416. Interpret or apply R.S. 4472, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 170, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026)

### Subpart 30.10—Definitions

2. Subpart 30.10 is amended by inserting after § 30.10–19 a new § 30.10–21, reading as follows:

**§ 30.10–21 Flammable or inflammable—TB/ALL.**

The words "flammable" and inflammable" are interchangeable or synonymous terms for the purpose of the regulations in this subchapter.

§ 30.10–35 [Amended]

3. Section 30.10–35 *Headquarters—TB/ALL* is amended by adding at the end thereof the zip code number "20226".

§ 30.10–36 [Amended]

4. The head note for § 30.10–36 *International voyage—TB/ALL* is amended by adding at the end thereof the phrase "—TB/ALL."

(R.S. 4405, as amended, 4417a, as amended, 4462, as amended; 46 U.S.C. 375, 391a, 416. Interpret or apply R.S. 4472, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 170, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026)

## PART 31—INSPECTION AND CERTIFICATION

### Subpart 31.01—General

§ 31.01–15 [Amended]

1. Section 31.01–15 *Application for inspection—TB/ALL*, paragraph (b), is amended by changing the number and title of the described form from "Form CG–833, Application for Inspection of Vessel" to "Form CG–3752, Application for Inspection of U.S. Vessel."

### Subpart 31.10—Inspections

2. Section 31.10–20(a) is amended to read as follows:

**§ 31.10–20 Drydocking or hauling out—TB/ALL.**

(a) Except for extensions as authorized by the Commandant, each steel hull tank vessel shall be placed in a drydock or on a slipway or hauled out for examination within the periods set forth in this paragraph, depending upon the service.

(1) Each tank vessel shall be drydocked or hauled out at intervals not to exceed 18 months if it operates in salt water an aggregate of more than 9 months in the 18-month period since it was last drydocked or hauled out.

(2) Each tank vessel shall be drydocked or hauled out at intervals not to exceed 36 months if it operates in salt water an aggregate of more than 3 months but not more than 6 months in each 12-month period since it was last drydocked or hauled out. When a tank vessel exceeds this aggregate amount of service in salt water in any 12-month period since it was last drydocked or hauled out, it shall be drydocked or hauled out within 6 months after the end of that period or within the 36-month interval, whichever is earlier.

(3) Each tank vessel shall be drydocked or hauled out at intervals of 48 months if it operates in salt water an aggregate of more than one month but not more than 3 months in each 12-month period since it was last drydocked or hauled out.

(4) Each tank vessel shall be drydocked or hauled out at intervals not to exceed 60 months if it operates in salt water an aggregate not exceeding one month in each 12-month period since it was last drydocked or hauled out.

(5) Tank barges used in fresh water service exclusively need not be drydocked or hauled out during the first 60-month interval after date of build, but shall be drydocked or hauled out between that time and the end of the 120th month after date of build, and at least once in each 60-month interval thereafter.

* * * * *

3. Section 31.10–35 is amended to read as follows:

**§ 31.10–35 Permit to proceed to another port for repair—TB/ALL.**

(a) The Officer in Charge, Marine Inspection, may issue a permit to proceed to another port for repair, Form CG–948, to a vessel if in his judgment it can be done with safety even if the certificate of inspection of the vessel has expired or is about to expire.

(b) Such permit will only be issued upon the written application of the master, owner or agent of the vessel.

(c) The permit will state upon its face the conditions under which it is issued and whether or not the vessel is permitted to carry freight or passengers. Passengers may not be carried if the certificate of inspection has expired.

(d) The permit shall be carried in a manner similar to that described in § 31.05–5 for a certificate of inspection.

(R.S. 4405, as amended, 4417a, as amended, 4462, as amended; 46 U.S.C. 375, 391a, 416. Interpret or apply R.S. 4488, as amended, sec. 3, 68 Stat. 675, 46 U.S.C. 481, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR 1952 Supp.)

## PART 32—SPECIAL EQUIPMENT, MACHINERY, AND HULL REQUIREMENTS

### Subpart 32.40—Accommodations

§ 32.40–1 [Amended]

1. Section 32.40–1 *Crew accommodations on tank ships of 100 gross tons or over constructed after January 1, 1938—T/ALL*, paragraph (a), is amended by changing the phrase "upper bunks" to "upper bunk" in the last sentence.

### Subject 32.60—Hull Requirements for Tank Vessels Constructed on and After July 1, 1951

2. Section 32.60–20 is amended by revising paragraphs (a) and (d) to read as follows:

**§ 32.60–20 Pumprooms on tank vessels carrying Grade A, B, C, D and/or E liquid cargo—TB/ALL.**

(a) *Cargo pumps.* In tank vessels carrying Grade A, B, C, or D liquid cargo, cargo pumps shall be isolated from source of vapor ignition by gastight bulkheads. A gastight bulkhead between the pumproom and the pump engine room may be pierced for drive shaft and pump engine control rods provided such openings are fitted with stuffing boxes or other approved gland arrangement. A steam driven pump shall not be considered a source of vapor ignition provided the steam temperature does not exceed 500° F.

* * * * *

(d) *Access.* The access to a cargo pumproom in a tank vessel carrying Grade A, B, C, or D liquid cargo shall be from the open deck.

(R.S. 4405, as amended, 4417a, as amended, 4462, as amended; 46 U.S.C. 375, 391a, 416. Interpret or apply sec. 3, 68 Stat. 675, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR, 1952 Supp.)

3. Part 32 is amended by inserting after § 32.60–45 a new Subpart 32.63, consisting of §§ 32.63–1 to 32.63–25, inclusive, reading as follows:

## SUBPART 32.63—HULL AND CARGO TANK REQUIREMENTS FOR TANK BARGES CONSTRUCTED OR CONVERTED ON OR AFTER JULY 1, 1964, AND CARRYING CERTAIN DANGEROUS BULK CARGOES

Sec.


32.63–1 Application—B/ALL.
32.63–5 Barge hull classifications—B/ALL.
32.63–8 Alternative arrangements—B/ALL.
32.63–10 Rakes and coamings—B/ALL
32.63–15 Subdivision and stability—B/ALL.
32.63–20 Hull structure—B/ALL.
32.63–25 Cargo tanks and supports—B/ALL.


AUTHORITY: The provisions of this Subpart 32.63 issued under R.S. 4405, as amended, 4417a, as amended, and 4462, as amended; 46 U.S.C. 375, 391a, 416. Interpret or apply sec. 3, 68 Stat. 675; 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR, 1952, Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026.

**§ 32.63–1 Application—B/ALL.**

(a) The requirements of this subpart shall apply to all barges, the construction or conversion of which is started on or after July 1, 1964, and carrying bulk cargoes as follows:

(1) Liquefied inflammable gases (Part 38 of this subchapter).

(2) Inflammable or combustible liquids having lethal characteristics (Class B or C poisons) (Part 39 of this subchapter).

(3) Certain inflammable or combustible dangerous cargoes in bulk (Part 40 of this subchapter).

(4) Inflammable liquids having a Reid vapor pressure in excess of 25 pounds per square inch, absolute, in independent tanks (Part 32).

**§ 32.63–5 Barge hull classifications—B/ALL.**

(a) Each barge subject to the provision of this subpart shall be assigned a hull type number. The Commandant will designate the barge hull types to be used for carrying cargoes in order to insure that the vessel is designed consistent with the degree and nature of the hazard of the commodity carried.

(b) For this purpose the barge hull types shall be as follows:

(1) *Type I barge hull.* Barge hulls classed as Type I are those designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo to the waterways and/or atmosphere.

(2) *Type II barge hull.* Barge hulls classed as Type II are those designed to carry products which require substantial preventive measures to preclude uncontrolled release to the atmosphere, but whose uncontrolled release to the waterways does not constitute a longlasting public or operating personnel hazard, though local and temporary pollution may occur.

(3) *Type III barge hull.* Barge hulls classed as Type III are those designed to carry products of sufficient hazard to require a moderate degree of control.

**§ 32.63–8 Alternative arrangements—B/ALL.**

(a) Alternative arrangements, differing from those specifically required by this subpart, may be considered and approved by the Commandant, if it is demonstrated to his satisfaction that a degree of safety is obtained which is consistent with the intent of this subpart.

**§ 32.63–10 Rakes and coamings—B/ALL.**

(a) Each barge hull shall be constructed with a suitable bow form (length, shape, and height of headlog) to protect against diving at the maximum speed at which the barge is designed to be towed. In any integrated tow, only the lead barge need comply with this requirement. In any case, the operator of the towing vessel shall be guided by appropriate speed limitations.

(b) All open hopper type barge hulls shall be provided with coamings around the hopper space and, additionally, a 36-inch minimum height plowshare breakwater on the forward rake. Coamings shall have a minimum height of 36 inches forward graduated to a minimum height of 24 inches at midlength and 18 inches thereafter.

**§ 32.63–15 Subdivision and stability—B/ALL.**

(a) *General.* In addition to complying with the requirements of § 31.10–30 of this subchapter as applicable, Types I and II barge hulls shall comply with the applicable provisions of this section.

(b) *Types I and II barge hulls.* (1) Types I and II barge hulls shall be constructed with a complete watertight deck, or if of "open hopper type", of such construction that positive buoyancy and stability will be maintained when the barge is fully loaded and the hopper space is flooded to the height of the main deck. Credit may be given for the buoyancy, if any, of the immersed portion of the full cargo tanks when an effective arrangement for securing the tanks is provided.

(2) (i) Type I barge hulls shall retain positive buoyancy and stability after holing the bottom or side shell plating anywhere on its girth, including the intersection of a transverse and a longitudinal watertight bulkhead.

(ii) Type I box barge hulls, specifically designed for operation in an integrated tow, shall retain positive buoyancy and stability after holing the bottom shell plating anywhere on its girth, except in way of a transverse watertight bulkhead, or after holing the side shell plating in way of a transverse watertight bulkhead.

(3) Type II barge hulls shall retain positive buoyancy and stability after holing the bottom or side shell plating anywhere on its girth except in way of a transverse watertight bulkhead.

**§ 32.63–20 Hull structure—B/ALL.**

(a) *General.* In addition to complying with the requirements of § 32.60–1, as applicable, barge hulls of Types I and II shall comply with the provisions of this section.

(b) *Types I and II barge hull.* Under an assumed grounding condition such that the forward rake bulkhead rests upon a pinnacle at the water surface, the maximum hull bending stress shall not exceed the following limits:

(1) Independent tanks may be installed in such a manner that they do not contribute to the strength and stiffness of the barge. In such case, the hull stress shall not exceed either 50 percent of the minimum ultimate tensile strength of the material or 70 percent of the yield strength when specified, whichever is greater.

(2) The Commandant may consider a reduction in hull stress when independent tanks are installed in such a manner as to contribute to the strength and stiffness of the barge and this is accounted for in determining the effective section modulus of the barge. In such case, the hull stress shall not exceed the percentage stress values prescribed in subparagraph (1) of this paragraph multiplied by the quantity $\left(1.5-\frac{SWT}{UTS}\right)$, where SWT is the stress calculated without including the effect of the tanks, and UTS is the minimum ultimate tensile strength of the material. The value SWT, however, shall in no case be more than 75 percent of UTS.

**§ 32.63–25 Cargo tanks and supports—B/ALL.**

(a) *General.* Saddles and hold-down securing straps for independent cargo tanks shall be designed to prevent tank failure due to loads induced in the saddles or straps by barge deflection.

(b) *Collision protection.* (1) All independent cargo tanks installed on Type I and Type II barge hulls shall be protected with suitable collision chocks or collision straps to withstand a longitudinal collision load of one and one-half times the weight of the tank and cargo. All other independent cargo tanks shall be provided with suitable collision chocks or collision straps to withstand a longitudinal collision load equal to the weight of the tank and cargo.

(2) All cargo tanks shall be so located as to reduce the likelihood of their being damaged in the event of collision. This protection shall be obtained by locating the cargo tanks not less than 4 feet from the side shell and box-end for Type I hulls and 3 feet for Type II barge hulls, and not less than 25 feet from the headlog at the bow for both types.

(c) *Cargo tank design*—(1) *Types I and II barge hulls.* (i) In addition to requirements provided for in applicable regulations for a specific commodity, cargoes subject to the provisions of this subpart shall be transported in cargo tanks meeting the requirements of this paragraph. Pressure vessel-type cargo tanks shall have sufficient additional strength so as to limit the maximum combined tank stress, including saddle horn and bending stresses, to 1.5 times the maximum allowable hoop stress in still water, and to the yield strength of the tank material or 70 percent of the minimum ultimate tensile strength of the tank material, if less, in the grounded condition as required by § 32.63–20(b).

(ii) Gravity type cargo tanks shall have sufficient additional strength to limit the maximum combined tank stress, including saddle horn and bending stresses, to the yield strength of the tank material or 70 percent of the minimum ultimate tensile strength of the tank material, if less, in the grounded condition as required by § 32.63–20(b).

(2) *Type III barge hulls.* In addition to the requirements of this paragraph, pressure vessel-type cargo tanks shall have sufficient additional strength so as to limit the maximum combined stress, including saddle horn and bending stresses, to 1.5 times the maximum allowable hoop stress.

## PART 33—LIFESAVING APPLIANCES

### Subpart 33.15—Equipment for Lifeboats, Liferafts, or Buoyant Apparatus

§ 33.15–15 [Amended]

1. Table 33.15–15(a) in § 33.15–15 *Required equipment for rigid type liferafts and buoyant apparatus—TB/LBR*, paragraph (a), is amended by inserting in the third column under "Great Lakes" a reference to footnote two (2) opposite letter identification "d" and "oars (units)".

### Subpart 33.40—Ring Life Buoys and Water Lights

§ 33.40–5 [Amended]

2. Table 33.40–5(a) in § 33.40–5 *Number required on tank ships—T/ALL*, paragraph (a) is amended by correcting in column 5 opposite "400 and under 600" the number from "2" to "9", and opposite "600 and under 800" the number from "19" to "12".

(R.S. 4405, as amended, 4417a, as amended, 4462, as amended, 4488, as amended; 46 U.S.C. 375, 391a, 416, 481)

## PART 35—OPERATIONS

### Subpart 35.01—Special Operating Requirements

§ 35.01–1 [Amended]

1. Section 35.01–1 *Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions—TB/ALL*, paragraph (d), is amended by revising in the last sentence the phrase from "gas chemist" to "marine chemist."

### Subpart 35.07—Logbook Entries

§ 35.07–10 [Amended]

2. The last sentences of § 35.07–10 *Actions required to be logged—TB/ALL*, paragraphs (b)(7) and (c)(1), are amended by revising the reference from "of this chapter" to "of this subchapter."

### Subpart 35.30—General Safety Rules

3. Subpart 35.30 is amended by inserting after § 35.30–10 a new § 35.30–15 reading as follows:

**§ 35.30–15 Combustible gas indicator—TB/ALL.**

(a) The provisions of this section shall only apply to United States flag vessels.

(b) Manned tank barges and tank ships shall be provided with a combustible gas indicator suitable for determining the presence of explosive concentrations of the cargo carried. An indicator which bears the label of Underwriters' Laboratories, Inc., Factory Mutual Engineering Division, or other organizations acceptable to the Commandant will be accepted as meeting this requirement.

(R.S. 4405, as amended, 4417a, as amended, 4462, as amended; 46 U.S.C. 375, 391a, 416. Interpret or apply R.S. 4488, as amended, sec. 3, 68 Stat. 675, 46 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950; 15 F.R. 6521; 167–14, Nov. 24, 1954, 19 F.R. 8026; 167–38, Oct. 26, 1959, 24 F.R. 8857)

SUBCHAPTER F—MARINE ENGINEERING

## PART 50—GENERAL PROVISIONS

### Subpart 50.10—Definition of Terms Used in This Subchapter

Section 50.10–25 is amended by changing the zone number to the ZIP Code number so that it reads as follows:

**§ 50.10–25 Headquarters.**

The term "headquarters" means the office of the Commandant, United States Coast Guard, Washington, D.C., 20226.

(R.S. 4405, as amended, 4462, as amended, 46 U.S.C. 375, 416. Treasury Department Order 120, July 31, 1950, 15 F.R. 6521)

## PART 51—MATERIALS

### Subpart 51.23—Corrosion Resisting Steel Plate, Sheet and Strip for Unfired Pressure Vessels

1. Section 51.23–1(a) is amended by revising Table 51.23–1 to read as follows:

**§ 51.23–1 Scope.**

(a) * * *

TABLE 51.23–1—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| A240–63 | Type 302 | Type 302. |
| A240–63 | Type 304 | Type 304. |
| A240–63 | Type 304L | Type 304L. |
| A240–63 | Type 309S | Type 309S. |
| A240–63 | Type 310S | Type 310S. |
| A240–63 | Type 316 | Type 316. |
| A240–63 | Type 316L | Type 316L. |
| A240–63 | Type 317 | Type 317. |
| A240–63 | Type 321 | Type 321. |
| A240–63 | Type 347 | Type 347. |
| A240–63 | Type 348 | Type 348. |
| A240–63 | Type 405 | Type 405. |
| A240–63 | Type 410 | Type 410. |
| A240–63 | Type 410S | Type 410S. |
| A240–63 | Type 430A | Type 430A. |
| A240–63 | Type 430B | Type 430B. |

### Subpart 51.24—Materials for Low Temperature Service

2. Section 51.24–1(a) is amended by revising Table 51.24–1 to read as follows:

**§ 51.24–1 Scope.**

(a) * * *

TABLE 51.24–1—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | Materials |
|---|---|
| A300–58 | Steel plates for pressure vessels for service at low temperatures. |
| A333–63T | Seamless and welded steel pipe for low temperature service. |
| A334–63T | Seamless and welded steel tubes for low temperature service. |
| A350–61T | Forged or rolled carbon and alloy steel flanges, forged fittings, and valves and parts for low temperature service. |
| A352–60T | Ferritic steel castings for pressure containing parts suitable for low temperature service. |

* * * * *

### Subpart 51.25—Carbon and Alloy-Steel and Wrought Iron Tubes

3. Section 51.25–1(a) is amended by revising Table 51.25–1(a) to read as follows:

**§ 51.25–1 Scope.**

(a) * * *

Table 51.25–1(a)—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| Carbon-steel and iron: | | |
| A83–63T | Low-carbon seamless steel | T83 |
| A178–63T | A (low-carbon electric-resistance welded steel). | T178–A |
| A178–63T | C (medium-carbon electric resistance welded steel). | T178–C |
| A179–63T | Low-carbon seamless steel condenser tubes. | T179 |
| A192–63T | Low-carbon seamless steel | T192 |
| A210–63T | Medium-carbon seamless steel. | T210 |
| A226–63T | Electric resistance welded steel. | T226 |
| Alloy steel: | | |
| A209–63T | T1 | T1 |
| A209–63T | T1a | T1a |
| A209–63T | T1b | T1b |
| A213–63T | T2 | T2 |
| A213–63T | T5 | T5 |
| A213–63T | T5b | T5b |
| A213–63T | T7 | T7 |
| A213–63T | T9 | T9 |
| A213–63T | T11 | T11 |
| A213–63T | T12 | T12 |
| A213–63T | T17 | T17 |
| A213–63T | T21 | T21 |
| A213–63T | T22 | T22 |
| A213–63T | TP304 | T304 |
| A213–63T | TP304L | T304L |
| A213–63T | TP310 | T310 |
| A213–63T | TP316 | T316 |
| A213–63T | TP316L | T316L |
| A213–63T | TP321 | T321 |
| A213–63T | TP321H | T321H |
| A213–63T | TP347 | T347 |
| A213–63T | TP348 | T348 |
| A250–63T | T1 | T1 |
| A250–63T | T1a | T1a |
| A250–63T | T1b | T1b |
| A423–63T | | |

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### Subpart 51.34—Carbon and Alloy-Steel and Wrought Iron Pipe

4. Section 51.34–1(a) is amended by revising Table 51.34–1 to read as follows:

**§ 51.34–1 Scope.**

(a) * * *

TABLE 51.34–1—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| Carbon-steel and iron: | | |
| A53–63T | Butt-welded steel | P53–BW |
| A53–63T | A (seamless steel) | P53–A |
| A53–63T | B (seamless steel) | P53–B |
| A53–63T | A (electric resistance welded steel). | P53–RW–A |
| A53–63T | B (electric resistance welded steel). | P53–RW–B |
| A106–63T | A (seamless steel) | P106–A |
| A106–63T | B (seamless steel) | P106–B |
| A106–63T | C (seamless steel) | P106–C |
| A135–63T | A (electric resistance welded steel). | P135–A |
| A135–63T | B (electric resistance welded steel). | P135–B |
| A72–62T | Lap-welded wrought iron. | P72–LW |
| A72–62T | Butt-welded wrought iron. | P72–BW |
| Alloy steel: | | |
| A312–63T | TP304 | P304 |
| A312–63T | TP304L | P304L |
| A312–63T | TP309 | P309 |
| A312–63T | TP310 | P310 |
| A312–63T | TP316 | P316 |
| A312–63T | TP316L | P316L |
| A312–63T | TP317 | P317 |
| A312–63T | TP321 | P321 |
| A312–63T | TP347 | P347 |
| A312–63T | TP348 | P348 |
| A335–63T | P1 | P1 |
| A335–63T | P2 | P2 |
| A335–63T | P5 | P5 |
| A335–63T | P5C | P5C |
| A335–63T | P7 | P7 |
| A335–63T | P9 | P9 |
| A335–63T | P11 | P11 |
| A335–63T | P12 | P12 |
| A335–63T | P15 | P15 |
| A335–63T | P21 | P21 |
| A335–63T | P22 | P22 |

## Subpart 51.46—Steel Forgings

5. Section 51.46–1 is amended by revising Table 51.46–1 to read as follows:

**§ 51.46–1 Scope.**

* * * * *

TABLE 51.46–1—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| Carbon-steel: | | |
| A105–61T | I | F105–I |
| A105–61T | II | F105–II |
| A181–61T | I | F181–I |
| A181–61T | II | F181–II |
| Alloy-steel: | | |
| A182–61T | F1 | F1 |
| A182–61T | F5 | F5 |
| A182–61T | F5a | F5a |
| A182–61T | F6 | F6 |
| A182–61T | F7 | F7 |
| A182–61T | F9 | F9 |
| A182–61T | F11 | F11 |
| A182–61T | F12 | F12 |
| A182–61T | F21 | F21 |
| A182–61T | F22 | F22 |
| A182–61T | F304 | F304 |
| A182–61T | F304L | F304L |
| A182–61T | F310 | F310 |
| A182–61T | F316 | F316 |
| A182–61T | F316L | F316L |
| A182–61T | F321 | F321 |
| A182–61T | F347 | F347 |
| A182–61T | F348 | F348 |
| A234–59T | WPA | WPA |
| A234–59T | WPB | WPB |
| A234–59T | WPC | WPC |
| A234–59T | WPI | WPI |
| A234–59T | WP12 | WP12 |
| A234–59T | WP11 | WP11 |
| A234–59T | WP22 | WP22 |
| A234–59T | WP5 | WP5 |
| A336–62T | F1 | F1 |
| A336–62T | F2 | F2 |
| A336–62T | F5 | F5 |
| A336–62T | F5a | F5A |
| A336–62T | F6 | F6 |
| A336–62T | F22 | F22 |
| A336–62T | F8 | F8 |
| A336–62T | F8M | F8M |
| A336–62T | F8C | F8C |
| A336–62T | F8T | F8T |
| A336–62T | F25 | F25 |
| A403–61T | WP304 | WP304 |
| A403–61T | WP304L | WP304L |
| A403–61T | WP309 | WP309 |
| A403–61T | WP310 | WP310 |
| A403–61T | WP347 | WP347 |
| A403–61T | WP316 | WP316 |
| A403–61T | WP316L | WP316L |
| A403–61T | WP317 | WP317 |
| A403–61T | WP321 | WP321 |
| A403–61T | WP348 | WP348 |

## Subpart 51.49—Carbon and Alloy-Steel Bolting and Nut Material

6. Section 51.49–1 is amended by revising Table 51.49–1 to read as follows:

**§ 51.49–1 Scope.**

* * * * *

TABLE 51.49–1—MATERIAL SPECIFICATIONS.

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| Carbon-steel bolting: | | |
| A307–63T | B | B |
| Alloy-steel bolting: | | |
| A193–62T | B5 (5 Cr–0.50 Mo) | B5 |
| A193–62T | B6 (12 Cr) | B6 |
| A193–62T | B7 (1 Cr–0.20 Mo) | B7 |
| A193–62T | B14 (1 Cr–0.35 Mo–0.25 Va) | B14 |
| A193–62T | B16 (1 Cr–0.55 Mo–0.30 Va) | B16 |
| A193–62T | B8C (18 Cr–8 Ni+Co) | B8C |
| A193–62T | B8T (18 Cr–8 Ni+Ti) | B8T |
| Carbon and alloy steel nuts: | | |
| A194–62T | 1 (carbon-steel) | 1 |
| A194–62T | 2 (carbon-steel) | 2 |
| A194–62T | 2H (carbon-steel) | 2H |
| A194–62T | 3 (5 Cr–0.50 Mo–0.10 Si) | 3 |
| A194–62T | 4 (0.15 Si–0.20 Mo) | 4 |

## Subpart 51.58—Steel Castings

7. Section 51.58–1(a) is amended by revising Table 51.58–1 to read as follows:

**§ 51.58–1 Scope.**

(a) * * *

TABLE 51.58–1—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| Carbon-steel: | | |
| A216–63T | WCA | WCA |
| A216–63T | WCB | WCB |
| Alloy-steel: | | |
| A217–60T | WC1 (C–Mo) | WC1 |
| A217–60T | WC4 (1 Ni–0.65 Cr–0.50 Mo). | WC4 |
| A217–60T | WC5 (0.80 Ni–0.70 Cr–1 Mo.) | WC5 |
| A217–60T | WC6 (1.25 Cr–0.50 Mo) | WC6 |
| A217–60T | WC9 (2.25 Cr–1 Mo) | WC9 |
| A217–60T | C5 (5 Cr–0.50 Mo) | C5 |
| A217–60T | C12 (9 Cr–1 Mo) | C12 |
| A351–63T | CA15 | CA15 |
| A351–63T | CF8 | CF8 |
| A351–63T | CF8M | CF8M |
| A351–63T | CF8C | CF8C |
| A351–63T | CH20 | CH20 |
| A351–63T | CK20 | CK20 |

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## Subpart 51.61—Iron Castings

8. Section 51.61–1 is amended by revising Table 51.61–1 to read as follows:

**§ 51.61–1 Scope.**

* * * * *

TABLE 51.61–1—MATERIAL SPECIFICATIONS

| A.S.T.M. designation | A.S.T.M. grade | Coast Guard grade |
|---|---|---|
| Nodular iron: | | |
| A395–61 | 60–45–15 | 60–45–15. |
| Malleable iron: | | |
| A47–61 | 32510 | A1. |
| A47–61 | 35018 | A2. |
| A197–47 | Cupola | B. |
| Cast iron: | | |
| A126–61T | Class A (regular) | C. |
| A126–61T | Class B (higher strength). | D. |
| A126–61T | Class C (high test) | E. |
| A278–62T | Class No. 20 | No. 20. |
| A278–62T | Class No. 25 | No. 25. |
| A278–62T | Class No. 30 | No. 30. |
| A278–62T | Class No. 35 | No. 35. |
| A278–62T | Class No. 40 | No. 40. |
| A278–62T | Class No. 50 | No. 50. |
| A278–62T | Class No. 60 | No. 60. |

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4421, as amended, 4426–4431, as amended, 4433, as amended, 4434, as amended, 4453, as amended, 4488, as amended, 4491, as amended, sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, as amended, sec. 17, 54 Stat. 166, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 399, 404–409, 411, 412, 435, 481, 489, 366, 395, 363, 367, 526p, 1333, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857)

# PART 52—CONSTRUCTION

## Subpart 52.05—Cylindrical Shells

**§ 52.05–10 [Amended]**

Section 52.05–10 *Computations,* is amended by revising certain items in Table 52.05–10(a) in paragraph (a) as follows:

a. For "pipes and tubes" made of "seamless carbon steel" under Subpart 51.25 and A.S.T.M. designation A83 (first line), in the third column under "A.S.T.M." grade, delete the letter "A", and in the fourth column, under "C.G." grade, change the designation from "T83–A" to "T83."

b. For "pipes and tubes" made of "electric-resistance-welded pipe" under Subpart 51.25 delete the entire second line for "A.S.T.M. designation A178, Grade A.S.T.M. 'B', C.G. 'T178–B'," etc.

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

# PART 55—PIPING SYSTEMS AND APPURTENANCES

## Subpart 55.07—Detail Requirements

1. Section 55.07–15(e)(1) is amended by revising Table 55.07–15(e 1) to read as follows:

**§ 55.07–15 Joints and flange connections.**

* * * * *

(e)(1) * * *

TABLE 55.07–15(e1)—STANDARDS FOR FLANGED, BUTT-WELDING, AND SOCKET-WELDING VALVES, FITTINGS, AND PIPE FLANGES

| Type | Pressure rating | Standard | Notes |
|---|---|---|---|
| Cast iron | 125 | ASA B16.1–1960 | (1) |
| Do | 250 | ASA B16.2–1960 | (2) |
| Bronze | 150 | ASA B16.24–1962 | (3) |
| Do | 300 | ASA B16.24–1962 | (3) |
| Steel | 150 | ASA B16.5–1961 | (4) |
| Do | 300 | ASA B16.5–1961 | (4) |
| Do | 400 | ASA B16.5–1961 | (4) |
| Do | 600 | ASA B16.5–1961 | (4) |
| Do | 900 | ASA B16.5–1961 | (4) |
| Do | 1,500 | ASA B16.5–1961 | (4) |
| Do | 2,500 | ASA B16.5–1961 | (4) |
| Do | | ASA B16.9–1958 | (5) |
| Do | | ASA B16.11–1946 | (6) |

[1] American Standard Cast Iron Pipe Flanges and Flanged Fittings, Class 125, published by the American Society of Mechanical Engineers, 345 East 47th St., New York, N.Y., 10017.

[2] American Standard Cast Iron Pipe Flanges and Flanged Fittings, Class 250, published by the American Society of Mechanical Engineers, 345 East 47th St., New York, N.Y., 10017.

[3] American Standard Brass or Bronze Flanges and Flanged Fittings, 150- and 300-lb., published by the American Society of Mechanical Engineers, 345 East 47th St., New York, N.Y., 10017.

[4] American Standard Steel Pipe Flanges and Flanged Fittings, published by the American Society of Mechanical Engineers, 345 East 47th St., New York, N.Y., 10017.

[5] American Standard Steel Butt-Welding Fittings, published by the American Society of Mechanical Engineers, 345 East 47th St., New York, N.Y., 10017.

[6] American Standard Steel-Socket Welding Fittings, published by the American Society of Mechanical Engineers, 345 East 47th St., New York, N.Y., 10017.

* * * * *

## Subpart 55.10—Pumping Arrangements and Piping Systems

1. Section 55.10–35(f) is amended to read as follows:

**§ 55.10–35 Fuel oil and cargo oil systems.**

* * * * *

(f) Outlets for drawing fuel or draining water from the fuel oil system are not permitted in machinery spaces. Test cocks shall not be fitted to fuel or cargo oil tanks.

2. Section 55.10–65 is amended by revising the heading and by revising paragraph (a) to read as follows:

**§ 55.10–65 Sounding devices.**

(a) All tanks shall be provided with a suitable means of determining liquid level. In lieu of sounding pipes, tanks for the carriage of Grade E or lower liquids which are separate from the hull may be provided with a reliable liquid level indicating device. Where such devices are attached to tanks for combustible liquids, they shall be of heat resistant materials, adequately protected from mechanical damage and shall be provided at the tank connections with devices which will automatically close in the event of rupture of the gage or gage lines. Except for main cargo tanks on tank vessels, all integral hull tanks and compartments, which are not at all times accessible under service conditions shall be fitted with sounding pipes.

* * * * *

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4421, as amended, 4426–4431, as amended, 4433, as amended, 4434, as amended, 4453, as amended, 4488, as amended, 4491, as amended, sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, as amended, sec. 17, 54 Stat. 166, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 399, 404–409, 411, 412, 435, 481, 489, 366, 395, 363, 367, 526p, 1333, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857)

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## PART 57—MAIN AND AUXILIARY MACHINERY

### Subpart 57.25—Steering Apparatus

Subpart 57.25, consisting of §§ 57.25–1 to 57.25–60, inclusive, is amended to read as follows:

Sec.


57.25–1 Steering apparatus; existing installations.
57.25–5 Steering apparatus; new installations.
57.25–10 Rudder movement.
57.25–15 Plan approval.
57.25–20 Power driven steering gear.
57.25–25 Auxiliary means of steering.
57.25–30 Steadying the rudder.
57.25–35 Rudder stops.
57.25–40 Buffers.
57.25–45 Pilothouse steering gear controls.
57.25–50 Alternative steering station steering gear controls.
57.25–55 Duplicate pilothouse steering gear controls systems.
57.25–60 Arrangement of steering wheels.
57.25–65 Special steering apparatus.
57.25–70 Steering gear piping.


AUTHORITY: The provisions of this Subpart 57.25 issued under R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4426–4431, as amended, 4433, as amended, 4434, as amended, 4453, as amended, 4472, as amended, 4491, as amended; sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1 and 2, 49 Stat. 1544, as amended, sec. 17, 54 Stat. 166, as amended, sec. 3, 54 Stat. 346, sec. 3, 54 Stat. 347, as amended, sec. 3, 70 Stat. 152, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 404–409, 411, 412, 435, 481, 489, 366, 395, 363, 367, 526p, 1333, 390b, 50 U.S.C. 198; E. O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857.

**§ 57.25–1 Steering apparatus; existing installations.**

(a) All existing vessels subject to inspection by the Coast Guard shall be provided with suitable steering apparatus. Extra steering apparatus consisting of relieving cables, or of auxiliary power- or hand-steering gear attached to the rudder stock independent of the regular steering gear, shall be provided.

(b) Replacements of steering apparatus on existing vessels shall be in accordance with this subpart for new installations.

**§ 57.25–5 Steering apparatus; new installations.**

(a) All new vessels subject to inspection by the Coast Guard, except certain towed barges, shall be provided with main and auxiliary steering apparatus in accordance with §§ 57.25–10 to 57.25–70, inclusive.

(b) The main steering gear shall be of adequate strength and of sufficient capacity to steer the vessel at maximum service speed. The main steering gear and rudder stock shall be so designed that they are not damaged at maximum astern speed.

(c) The auxiliary steering gear shall be independent of the main steering gear and shall be of adequate strength and of sufficient capacity to steer the vessel at navigable speed and capable of being brought speedily into action in an emergency.

(d) When the steering gear is power operated, the exact position of the rudder shall be indicated at the main steering station.

**§ 57.25–10 Rudder movement.**

(a) The main steering gear shall be capable of putting the rudder over from 35 degrees on one side to 35 degrees on the other side with the vessel running ahead at the maximum continuous rated shaft R.P.M. The timing may be conducted from 35 degrees on one side through 30 degrees on the other side, and the average rate of the rudder shall be not less than 2⅓ degrees per second.

(b) The auxiliary steering gear where power driven shall be capable of putting the rudder over from 15 degrees on one side to 15 degrees on the other side in 60 seconds with the vessel running ahead at half speed, or 7 knots, whichever is greater.

**§ 57.25–15 Plan approval.**

(a) General arrangement plans of the main and auxiliary steering arrangements and piping systems shall be submitted to the Commandant (MMT), U.S. Coast Guard, Washington, D.C., 20226, for approval.

**§ 57.25–20 Power driven steering gear.**

(a) The main steering gear shall be power driven for vessels over 250 feet in length or when the required upper rudder stock diameter is over 9 inches. However, power-driven main steering gear shall be required for any vessel where the hand steering gear is not considered capable of effectively complying with the requirements of § 57.25–10.

(b) The auxiliary steering gear shall be power driven when the required upper rudder stock diameter is over 9 inches for passenger vessels and over 14 inches for cargo vessels.

**§ 57.25–25 Auxiliary means of steering.**

(a) An auxiliary means of steering will not be required where the main gear is of the dual-power hydraulic type, having two independent pumps and connections and separate leads to the pump prime movers from the source of power, and each independent steering gear power unit has the required capacity for a main steering gear in order to meet the requirements of § 57.25–10(a). In such cases the attachment to the rudder stock shall be designed for strength in excess of that of the rudder stock.

(b) A suitable arrangement of block and tackle will be acceptable as an auxiliary steering means, and when arranged for operation by means of power driven winches or similar machinery, will be considered an auxiliary power steering gear.

(c) An auxiliary means of steering will not be required on double-ended ferryboats where independent steering gears are fitted at each end of the vessel, and two sources of power are provided where the gear is power driven.

**§ 57.25–30 Steadying the rudder.**

(a) All oceangoing vessels requiring power gears shall be provided with arrangements for steadying the rudder in the event of an emergency and when a change of gear is required. On hydraulic type steering gears a suitable arrangement of stop valves in the main piping may be considered as a means of steadying the rudder.

**§ 57.25–35 Rudder stops.**

(a) Main power steering gear shall be provided with positive arrangements for stopping the gear before the rudder stops are reached. These arrangements shall be synchronized with the rudder stock or the position of the gear itself, rather than with the steering gear control system.

(b) Strong and effective rudder stops are to be fitted. Where adequate positive stops are provided within the gear, structural stops wil not be required.

**§ 57.25–40 Buffers.**

(a) On vessels in ocean, coastwise, and Great Lakes service, steering gears other than the hydraulic type shall be designed with suitable buffer arrangements to relieve the gear from shocks to the rudder.

**§ 57.25–45 Pilothouse steering gear controls.**

(a) Control of the main steering gear shall be provided from the pilothouse by mechanical, hydraulic, electrical, or other

approved means. The arrangement of the control system and steering gear components shall provide full followup control of the rudder. Supplementary steering control not employing full followup may also be provided from the pilothouse.

(b) Any power required for the pilothouse steering control systems shall be supplied from the steering gear room. Means shall be provided in the steering gear room to disconnect the steering control system from the power source.

**§ 57.25–50 Alternative steering station steering gear controls.**

(a) An alternative steering station shall be provided from which control of the main steering gear can be effected by mechanical, hydraulic, electrical, or other approved means. The alternative steering station shall be located on the after weather deck unless duplicate pilothouse control means are provided in accordance with § 57.25–55. The arrangement of the alternative steering control system and the steering gear components shall provide full followup control of the rudder unless a suitable rudder angle indicator is provided at the alternative steering station.

(b) Means shall be provided to enable orders to be transmitted from the pilothouse to the alternative steering station.

(c) Components of the alternative steering station control system shall be completely separate and independent of the pilothouse steering control system. The shafting, piping, or electrical cable associated with the control means at the alternative steering stations shall be run as widely separated as practicable from the shafting, piping, or electrical cable of the pilothouse steering control systems.

(d) Any power required for the alternative steering control means shall be supplied from the steering gear room. Means shall be provided in the steering gear room to disconnect the alternative steering means from the source of power and, if necessary, from the associated steering gear.

(e) Where it is not practicable to comply with the requirements of this section because of the arrangement of the vessel or the type of steering gear installed, other types of steering gear control systems may be considered. Such systems shall provide steering gear control equivalent to that required by this section. Ease of maintenance, accessibility, and location and arrangement of components, as well as the type of control system, will be among the factors evaluated when determining equivalency.

**§ 57.25–55 Duplicate pilothouse steering gear controls systems.**

(a) Two separate and independent steering control systems shall be provided for controlling the steering gear from the pilothouse when the alternative steering means is not located on the after weather deck.

(b) Duplicate pilothouse steering gear controls, when installed, shall comply with the following requirements:

(1) Where the steering gear is power driven, the arrangements of the equipment shall be such that full followup control of the rudder is provided with either of the control systems in use. Supplementary steering control not employing followup may be incorporated.

(2) Means shall be provided in the pilothouse to select either of the two control systems to be in control of the rudder. An "off" position which will disconnect power to both systems may be provided in the pilothouse. Interlocks shall be provided for this control system selector so that only one may be in use at a time.

(3) Any power required for the pilothouse steering control systems shall be supplied from the steering gear room. Means shall be provided in the steering gear room to disconnect remote steering gear control systems from the source of power.

(4) The shafting, piping, or electric cables of the two pilothouse steering control systems shall be run as widely separated as practicable throughout their length between the pilothouse and the steering gear room.

(c) Where only the main steering gear is power driven, arrangements shall be such that either steering control system may be connected to control the main steering gear. Where both the main and auxiliary steering gears are power driven, one steering control system shall control the main steering gear and the other shall control the auxiliary steering gear.

(d) For dual-power hydraulic type steering gears, of such a type that an auxiliary means of steering is not required, one control system shall control one hydraulic unit and the other control system shall control the other hydraulic unit.

**§ 57.25–60 Arrangement of steering wheels.**

(a) Steering wheels, including "trick wheels" which are used as the alternative steering means, shall turn in a clockwise direction for "right rudder" and counterclockwise for "left rudder." The ship's heading shall be to the right, following clockwise movement of the wheel.

(b) The arrangement of steering stations shall be such that the helmsman is abaft the wheel. However, if a wheel is fitted in the steering gear room, and is intended solely for warming up and testing the gear, the helmsman need not stand abaft the wheel. The rims of the wheels shall be plainly marked with arrows and lettering for right and for left rudder, or a suitable notice indicating these directions shall be posted directly in the helmsman's line of vision.

**§ 57.25–65 Special steering apparatus.**

(a) Where no regular rudder is fitted and steering action is obtained by a change of setting of the propelling unit, auxiliary steering is not required, nor will the requirements of this subpart be generally applicable. Special consideration will be given by the Commandant for such installations.

(b) When tiller bars instead of wheels are installed in the pilothouse, they shall be fore and aft when the rudders are amidships. A pointer shall be fitted to the forward end of the bar which shall point directly ahead when the rudders are amidships, and shall point to the right when the bow of the ship moves to the right, and shall point to the left when the bow of the ship moves to the left.

**§ 57.25–70 Steering gear piping.**

(a) The arrangement of piping for hydraulic steering gears shall be such that a change from the main to the auxiliary gear can be readily effected.

(b) A relief valve shall be provided for the protection of the hydraulic system.

(c) Pressure piping shall meet the requirements of Part 55 of this subchapter.

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## PART 59—INDEPENDENT INTERNAL COMBUSTION ENGINE FUEL TANKS

### Subpart 59.10—Diesel Fuel Tanks

Section 59.10–1(e) is amended to read as follows:

**§ 59.10–1 Construction.**

* * * * *

(e) All nozzles for pipe connections shall be securely riveted, welded, brazed or soldered to the tank. Where liquid level indicating devices are attached to the tank, they shall be of heat resistant materials adequately protected from mechanical damage and provided at the tank connections with devices which will automatically close in the event of rupture of the gage or gage lines.

(R.S. 4405, as amended, 4462, as amended, 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4421, as amended, 4426–4431, as amended, 4433, as amended, 4434, as amended, 4453, as amended, 4488, as amended, 4491, as amended, sec. 14, 29 Stat. 690, as amended, 41 Stat. 305, as amended, 49 Stat. 1544, as amended, secs. 3, 17, 54 Stat. 347, as amended, 166, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 399, 404–409, 411, 412, 435, 481, 489, 366, 363, 367, 526p, 1333; 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp.)

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## SUBCHAPTER H—PASSENGER VESSELS

## PART 70—GENERAL PROVISIONS

### Subpart 70.05—Application

**§ 70.05–3 [Amended]**

1. In order to have text agree with § 2.01–13, paragraph (c) of § 70.05–3 *Foreign vessels subject to the requirements of this subchapter,* is amended by inserting after the word "construction" the word "or".

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

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## PART 71—INSPECTION AND CERTIFICATION

### Subpart 71.20—Initial Inspection

**§ 71.20–5 [Amended]**

1. Paragraph (a) of § 71.20–5 *When made,* is amended by changing the reference from "Form CG–833" to "Form CG–3752, Application for Inspection of U.S. Vessel."

### Subpart 71.25—Annual Inspection

§ 71.25–5 [Amended]

2. Paragraph (a) of § 71.25–5 *When made*, is amended by changing the name and title of a form from "Form CG–833, Application for Inspection of Vessel," to "Form CG–3752, Application for Inspection of U.S. Vessel."

§ 71.25–20 [Amended]

3. Paragraph (a) (3) of § 71.25–20 *Fire detecting and extinguishing equipment*, is amended by changing the first three words from "On all fire" to "All fire."

### Subpart 71.60—Special Operating Requirements

§ 71.60–1 [Amended]

4. Paragraph (d) of § 71.60–1 *Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions*, is amended by changing in the last sentence the phrase from "gas chemist" to "marine chemist."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## PART 72—CONSTRUCTION AND ARRANGEMENT

### Subpart 72.20—Accommodations for Officers and Crew

§ 72.20–90 [Amended]

Paragraph (a) (1) of § 72.20–90 *Vessels contracted for prior to November 19, 1952*, is amended by changing in the last sentence the phrase "made of the same standard" to "made to the same standard."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## PART 73—WATERTIGHT SUBDIVISION

### Subpart 73.15—Rules for Subdivision—Vessels in Services Other Than Ocean or Coastwise and Vessels Under 150 Gross Tons in Ocean or Coastwise Service and Not on an International Voyage

§ 73.15–5 [Amended]

1. Paragraph (f) of § 73.15–5 *Compartmentation of all vessels other than ferry vessels*, is amended in the first sentence by changing the word from "persons" to "passengers."

### Subpart 73.35—Watertight Bulkhead Doors

2. Section 73.35–20(c) (2) is amended to read as follows:

**§ 73.35–20 Door operating requirements.**

* * * * *

(c) * * *

(2) There shall be at least two independent power sources capable of opening and closing all the doors under control, each of them capable of operating all the doors simultaneously. Operations will be regarded as simultaneous if all doors can be closed in not more than 60 seconds after actuation of a single master control. The power source shall have indicating lights at the central control station to indicate which power source is available for use. The power supply sources for the operation of electric power operated watertight doors shall meet the requirements of § 111.65–30(c) in Subchapter J (Electrical Engineering) of this chapter. In the case of hydraulic operation, each power source shall consist of a pump capable of closing all doors within the foregoing time limit. In addition, there shall be, for the whole installation, hydraulic accumulators of sufficient capacity to operate all the doors at least three times, i.e., closed-open-closed. In the case of combination electric hydraulic systems utilizing individual electrically driven hydraulic actuators on each door, a duplication of these actuators and drives is not required. The fluid used in hydraulic systems shall be one which retains adequate operational fluidity at any temperature liable to be encountered by the vessel during its service.

* * * * *

### Subpart 73.45—Watertight Integrity Above the Margin Line

§ 73.45–10 [Amended]

3. Paragraph (a) of § 73.45–10 *Side openings*, is amended in the second sentence by changing the phrase from "cargo and cooling ports" to "cargo and coaling ports."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4426, as amended, 4490, as amended, sec. 3, 24 Stat. 129, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, sec. 2, 45 Stat. 1493, as amended, sec. 2, 49 Stat. 888, as amended, sec. 5, 49 Stat. 1384, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 70 Stat. 152, sec. 3, 68 Stat. 675; 46 U.S.C. 391, 392, 404, 482, 483, 395, 363, 85a, 88a, 369, 367, 1333, 390b, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–20, June 18, 1956, 21 F.R. 4894; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857)

## PART 75—LIFESAVING EQUIPMENT

### Subpart 75.33—Blocks and Falls

§ 75.33–15 [Amended]

1. Paragraph (b) of § 75.33–15 *Installations where lifeboat winches are not used*, is amended in the first sentence by changing the phrase from "covered tubes" to "covered tubs."

### Subpart 75.43—Ring Life Buoys and Water Lights

§ 75.43–90 [Amended]

2. Paragraph (a) (1) of § 75.43–90 *Vessels contracted for prior to November 19, 1952*, is amended in the last sentence by changing the phrase "newer installations" to "new installations."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## PART 76—FIRE PROTECTION EQUIPMENT

### Subpart 76.05—Fire Detecting and Extinguishing Equipment, Where Required

1. Section 76.05–25 is amended by revising the heading to read as follows:

**§ 76.05–25 Hand portable fire extinguishers and semi-portable fire extinguishing systems.**

### Subpart 76.17—Foam Extinguishing Systems, Details

§ 76.17–5 [Amended]

2. Paragraph (b) (1) (i) of § 76.17–5 *Quantity of foam required*, is amended by changing the phrase from "form systems" to "foam systems."

### Subpart 76.23—Manual Sprinkling System, Details

§ 76.23–10 [Amended]

3. Paragraph (b) (1) of § 76.23–10 *Quantity, pipe sizes, and discharge rates*, is amended by changing in the first sentence the phrase "three-eight inch" to "three-eighth inch."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## PART 78—OPERATIONS

### Subpart 78.37—Log Book Entries

§ 78.37–5 [Amended]

Paragraph (a) (2) of § 78.37–5 *Actions required to be logged*, is amended by changing at the end thereof a reference from "§ 78.17–1" to "§ 78.17–3."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## SUBCHAPTER I—CARGO AND MISCELLANEOUS VESSELS

## PART 90—GENERAL PROVISIONS

### Subpart 90.05—Application

§ 90.05–1 [Amended]

In order to have text agree with § 2.01–13, paragraph (b) of § 90.05–1 *Vessels subject to requirements of this subchapter*, is amended by inserting after the word "construction" the word "or".

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## PART 91—INSPECTION AND CERTIFICATION

### Subpart 91.20—Initial Inspection

§ 91.20–5 [Amended]

1. Section 91.20–5 *When made*, paragraph (a), is amended by changing a reference from "Form CG–833" to "Form CG–3752, Application for Inspection of U.S. Vessel."

### Subpart 91.25—Inspection for Certification

§ 91.25–5 [Amended]

2. Section 91.25–5 *When made*, paragraph (a), is amended by changing the number and title of a form from "Form

CG–833, Application for Inspection of Vessel" to "Form CG–3752, Application for Inspection of U.S. Vessel."

### Subpart 91.40—Drydocking

3. Section 91.40–1(a) is amended by revising subparagraphs (3) and (4) to read as follows:

**§ 91.40–1 When required.**

(a) * * *

(3) Each vessel shall be drydocked or hauled out at intervals of 48 months if it operates in salt water an aggregate of more than one month but not more than 3 months in each 12-month period since it was last drydocked or hauled out.

(4) Each vessel shall be drydocked or hauled out at intervals not to exceed 60 months if it operates in salt water an aggregate not exceeding one month in each 12-month period since it was last drydocked or hauled out.

**§ 91.40–5 [Corrected]**

4. The designation of the section following § 91.40–1 is changed from "§ 97.-40–5" to "§ 91.40–5 *Notice by owner*".

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4418, as amended, 4426, as amended, 4427, as amended, 4433, as amended, 4453, as amended, 4488, as amended, sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 392, 404, 405, 411, 435, 481, 366, 395, 363, 367, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857)

### Subpart 91.50—Special Operating Requirements

**§ 91.50–1 [Amended]**

In § 91.50–1 *Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions:*

5. Paragraph (b)(2) is amended in the "except" clause by changing the phrase from "such cargo and tanks" to "such cargo tanks."

6. Paragraph (d) is amended in the last sentence by changing the phrase from "gas chemist" to "marine chemist."

(R.S. 4405, as amended, 4462, as amended; 46 U.S. 375, 416)

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## PART 98—SPECIAL CONSTRUCTION, ARRANGEMENT, AND PROVISIONS FOR CERTAIN DANGEROUS CARGOES IN BULK

### Subpart 98.03—Barges Carrying Dangerous Cargoes

1. Subpart 98.03, consisting of §§ 98.03–1 to 98.03–10, inclusive (§ 98.03–10 continued without change), is amended to read as follows:

Sec.

98.03–1 Application.
98.03–5 Effective dates for certain requirements.
98.03–7 Barge hull classifications.
98.03–8 Alternative arrangements.
98.03–10 Special operating requirements for open hopper type barges while carrying dangerous cargoes in bulk.
98.03–15 Rakes and coamings.
98.03–20 Subdivision and stability.
98.03–25 Hull structure.
98.03–30 Cargo tanks and supports.

AUTHORITY: The provisions of this Subpart 98.03 issued under R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417a, as amended, 4472, as amended; 46 U.S.C. 391a, 170. Treasury Department Order 120, July 31, 1950, 15 F.R. 6521.

**§ 98.03–1 Application.**

(a) All barges carrying in bulk any of the dangerous cargoes specifically noted in this part shall be subject to the applicable provisions of this subpart.

**§ 98.03–5 Effective dates for certain requirements.**

(a) The special operating requirements in § 98.03–10 for all open hopper type barges while carrying in bulk any of the dangerous cargoes specifically noted in this part shall be in effect on and after March 1, 1963.

(b) All barges, the construction or conversion of which is started on or after July 1, 1964, shall conform to the requirements of §§ 98.03–7, 98.03–8, 98.03–15, 98.03–20, 98.03–25, and 98.03–30.

**§ 98.03–7 Barge hull classifications.**

(a) Each barge constructed or converted in conformance with this subpart shall be assigned a hull type number. The Commandant will designate the barge hull types to be used for carrying cargoes in order to insure that the vessel is designed consistent with the degree and nature of the hazard of the commodity carried.

(b) For this purpose the barge hull types shall be defined as follows:

(1) *Type I barge hull.* Barge hulls classed as Type I are those designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo to the waterways and/or atmosphere.

(2) *Type II barge hull.* Barge hulls classed as Type II are those designed to carry products which require substantial preventive measures to preclude uncontrolled release to the atmosphere, but whose uncontrolled release to the waterways does not constitute a longlasting public or operating personnel hazard, though local and temporary pollution may occur.

(3) *Type III barge hull.* Barge hulls classed as Type III are those designed to carry products of sufficient hazard to require a moderate degree of control.

**§ 98.03–8 Alternative arrangements.**

(a) Alternative arrangements, differing from those specifically required by this subpart, may be considered and approved by the Commandant, if it is demonstrated to his satisfaction that a degree of safety is obtained which is consistent with the intent of this subpart.

**§ 98.03–10 Special operating requirements for open hopper type barges while carrying dangerous cargoes in bulk.**

(a) All open hopper type barges, while carrying in bulk any of the dangerous cargoes specifically noted in this part, shall be operated in conformance with the provisions in this section. However, the provisions in this section are not applicable to such barges when empty (not necessarily cleaned or gas-freed).

(b) (1) Except as otherwise provided in this section, no such open hopper type barge shall be placed as lead barge in any tow. Such barges shall be placed in protected positions within the tow so that the danger from diving or swamping will be minimized. Where, due to operating conditions, compliance with this subparagraph is impossible, the provisions of subparagraph (3) of this paragraph apply. The person in charge of the towing vessel shall be responsible for compliance with this subparagraph.

(2) No such open hopper type barge shall be moved from a loading facility unless all void spaces and bilges are substantially free of water. Periodic inspections and necessary pumping shall be carried out to insure the maintenance of such water-free conditions, in order to minimize the free surface effect in both the longitudinal and transverse directions. Except when otherwise considered necessary for inspection or pumping, all hatch covers and other hull closure devices for void spaces and hull compartments shall be closed and secured at all times. In the case of unmanned barges, the person in charge of the towing vessel shall be deemed to be in charge of the barge, and all requirements to be carried out on the barge shall be carried out by or under the direction of such person.

(3) When an open hopper type barge is in an exposed position, such that protection from swamping provided by adjoining barges cannot be obtained from location within the tow alone, it shall be the responsibility of the person in charge of the towing vessel to control speed so as to insure protection against diving and swamping of the barge, having regard to its design and freeboard, and other operating conditions.

(c) To show, that special operating requirements apply to a specific open hopper type barge, additional placards or signs shall be displayed in at least four different locations on the barge when the cargoes subject to this part are carried in any form in the cargo tanks. The placards or signs shall be posted on the barge approximately amidships on each side and near the centerline of each end, facing outboard. Racks, or other suitable means, for mounting such placards or signs shall be so arranged as to provide clear visibility and shall be protected from becoming readily damaged or obscured. The placards or signs shall be at least equal in dimensions to the ICC standard tank car "Dangerous" placard (10¾ inches square or larger), and shall display a circle (10 inches in diameter or larger) with alternating quadrants of white and red, and so mounted that the red quadrants are

centered on the vertical axis. The shipper and/or owner of the barge shall be responsible for the installation of the required placards or signs, including maintenance of them while such barge is in temporary storage with cargo aboard. The person in charge of the towing vessel shall be responsible for the continued maintenance of the placards or signs while such barge is in transit.

**§ 98.03–15 Rakes and coamings.**

(a) Each barge hull shall be constructed with a suitable bow form (length, shape and height of headlog) to protect against diving at the maximum speed at which the barge is designed to be towed. In any integrated tow, only the lead barge need comply with this requirement. In any case, the operator of the towing vessel shall be guided by appropriate speed limitations.

(b) All open hopper type barges shall be provided with coamings around the hopper space and a 36-inch minimum height plowshare breakwater on the forward rake. Coamings shall have a minimum height of 36 inches forward graduated to a minimum height of 24 inches at midlength and 18 inches thereafter.

**§ 98.03–20 Subdivision and stability.**

(a) *General.* In addition to complying with the requirements of Part 93 of this subchapter as applicable, Types I and II barge hulls shall comply with the provisions of this section.

(b) *Types I and II barge hulls.* (1) Types I and II barge hulls shall be constructed with a complete watertight deck, or if of "open hopper type", with such construction that positive buoyancy and stability will be maintained when the barge is fully loaded and the hopper space is flooded to the level of the main deck. Credit may be given for the buoyancy, if any, of the immersed portion of the full cargo tanks when an effective arrangement for securing the tanks is provided.

(2) (i) Type I barge hulls shall retain positive buoyancy and stability after holing the bottom or side shell plating anywhere on its girth including the intersection of a transverse and a longitudinal watertight bulkhead.

(ii) Type I box barge hulls, specifically designed for operation in an integrated tow, shall retain positive buoyancy and stability after holing the bottom shell plating anywhere on its girth, except in way of a transverse watertight bulkhead, or after holing the side shell plating in way of a transverse watertight bulkhead.

(3) Type II barge hulls shall retain positive buoyancy and stability after holing the bottom or side shell plating anywhere on its girth except in way of a transverse watertight bulkhead.

**§ 98.03–25 Hull structure.**

(a) *General.* In addition to complying with the structural requirements of Part 92 of this subchapter as applicable, Types I and II barge hulls shall comply with the provisions of this section.

(b) *Types I and II barge hulls.* Under an assumed grounding condition such that the forward rake bulkhead rests upon a pinnacle at the water surface, the maximum hull bending stress shall not exceed the following limits:

(1) Independent tanks may be installed in such a manner so that they do not contribute to the strength and stiffness of the barge. In such case, the hull stress shall not exceed either 50 percent of the minimum ultimate tensile strength of the material or 70 percent of the yield strength when specified, whichever is greater.

(2) The Commandant may consider a reduction in hull stress when independent tanks are installed in such a manner as to contribute to the strength and stiffness of the barge and this is accounted for in determining the effective section modulus of the barge. In such case, the hull stress shall not exceed the percentage stress values prescribed in subparagraph (1) of this paragraph, multiplied by the quantity $\left(1.5-\frac{SWT}{UTS}\right)$, where SWT is the stress calculated without including the effect of the tanks, and UTS is the minimum ultimate tensile strength of the material. The value SWT, however, shall in no case be more than 75 percent of UTS.

**§ 98.03–30 Cargo tanks and supports.**

(a) *General.* Saddles and hold-down securing straps for independent cargo tanks shall be designed to prevent tank failure due to loads induced in the saddles or straps by barge deflection.

(b) *Collision protection.* (1) All independent cargo tanks installed on Type I and Type II barge hulls shall be protected with suitable collision chocks or collision straps to withstand a longitudinal collision load of one and one-half times the weight of the tank and cargo. All other independent cargo tanks shall be provided with suitable collision chocks or collision straps to withstand a longitudinal collision load equal to the weight of the tank and cargo.

(2) All cargo tanks shall be so located as to reduce the likelihood of their being damaged in the event of collision. This protection shall be obtained by locating the cargo tanks not less than 4 feet from the side-shell and box-end for Type I barge hulls and 3 feet for Type II barge hulls, and not less than 25 feet from the headlog at the bow for both types.

(c) *Cargo tank design*—(1) *Types I and II barge hulls.* (i) In addition to requirements provided for in applicable regulations for a specific commodity, cargoes subject to the provisions of this subpart shall be transported in cargo tanks meeting the requirements of this paragraph. Pressure vessel type cargo tanks shall have sufficient additional strength so as to limit the maximum combined tank stress, including saddle horn and bending stresses, to 1.5 times the maximum allowable hoop stress in still water, and to the yield strength of the tank material or 70 percent of the minimum ultimate tensile strength of the tank material, if less, in the grounded condition as required by § 98.03–25(b).

(ii) Gravity type cargo tanks shall have sufficient additional strength to limit the maximum combined tank stress, including saddle horn and bending stresses, to the yield strength of the tank material or 70 percent of the minimum ultimate tensile strength of the tank material, if less, in the grounded condition as required by § 98.03–25(b).

(2) *Type III barge hulls.* In addition to the requirements of this paragraph, pressure-vessel-type cargo tanks shall have sufficient additional strength so as to limit the maximum combined stress, including saddle horn and bending stress, to 1.5 times the maximum allowable hoop stress.

## Subpart 98.20—Liquid Chlorine in Bulk

2. Section 98.20–30 is amended by revising paragraphs (b), (c) and (g), and by canceling paragraph (h) and these revised paragraphs read as follows:

**§ 98.20–30 Valves, fittings, and accessories.**

* * * * *

(b) Each tank shall be provided with safety relief valves and with liquid and vapor connections fitted with manually operated shutoff valves. All valves shall be bolted to the cover or covers specified in § 98.20–10(c)(1), and shall be protected against mechanical damage by a suitable protective metal housing. Other openings in tanks are prohibited. A drain connection shall be provided from the protective housing and led overboard just above the deepest load line.

(c) All liquid and vapor connections, except safety relief valves, shall be fitted with automatic excess flow valves, which shall be located on the inside of the tank.

* * * * *

(g) Bypass openings are not permitted in excess flow valves.

(h) [Cancelled]

**§ 98.20–35 [Cancelled]**

3. Section 98.20–35 *Filling and discharge pipes* is cancelled.

(R.S. 4405, as amended, 4462, as amended, 4472, as amended; 46 U.S.C. 375, 416, 170. Interpret or apply sec. 3, 68 Stat. 675; 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp.)

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SUBCHAPTER J—ELECTRICAL ENGINEERING

# PART 110—GENERAL PROVISIONS

## Subpart 110.10—Reference Specifications, Standards, and Codes

**§ 110.10–1 [Amended]**

Section 110.10–1 *General*, paragraph (d) is amended by revising the name and address in the introductory sentence from "American Institute of Electrical Engineers, 33 West 39th Street, New York 18, N.Y.," to "Institute of Electrical and Electronic Engineers, Box A, Lenox Hill Station, New York, N.Y., 14481."

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

## PART 111—ELECTRICAL SYSTEM; GENERAL REQUIREMENTS

### Subpart 111.05—General Requirements

1. Section 111.05–15(g) is amended by adding at end thereof a subparagraph (3) reading as follows:

**§ 111.05–15 General considerations.**

* * * * *

(g) *Means for ground detection.* * * *

(3) For dual-voltage, grounded-neutral, alternating current distribution systems, an ammeter shall be provided to indicate current flowing in the ground connection. The ammeter shall have a full scale range of 10 amperes. An ammeter switch of the spring return to "on" (ammeter read) type shall be provided. Where the ammeter is located remote from the ground connection and a current transformer is used, a suitable protective device shall be provided near the current transformer to prevent high voltage in the event of an open circuit. The ammeter and associated equipment shall be capable of sustaining without damage the maximum fault current available.

### Subpart 111.10—Generators

2. Section 111.10–10(a) is amended to read as follows:

**§ 111.10–10 Excitation.**

(a) *General.* (1) Direct-current rotating exciters shall conform to all the applicable requirements for direct-current generators.

* * * * *

### Subpart 111.25—Motors

3. Section 111.25–5(b) is amended by deleting the word "and" at the end of subparagraph (7); and by changing the period (.) to a semicolon ";" and by adding the word "and" at the end of subparagraph (8); and by adding a new subparagraph (9) reading as follows:

**§ 111.25–5 Nameplates.**

* * * * *

(b) * * *

(9) For multi-speed motors, amperes at rated load for each winding or winding connection.

4. Section 111.25–35(a), but not Table 111.25–35(a), is amended to read as follows:

**§ 111.25–35 Current ratings.**

(a) For continuous duty motors, the current values given in the Table 111.25–35(a) shall be used for the purpose of determining the current-carrying capacity of conductors, switches, branch-circuit overcurrent devices, etc., in lieu of the actual current ratings marked on the motor nameplate. For multi-speed motors, for motors of unusual speeds, and for other than continuous duty motors, the nameplate current values shall be used. The motor-running overcurrent protection shall be based on the motor nameplate current rating or ratings.

* * * * *

### Subpart 111.45—Motor Circuits and Controllers

5. Section 111.45–5 is amended by revising paragraphs (b) (including subparagraphs), (k), and (p) to read as follows:

**§ 111.45–5 Motor overcurrent protection.**

* * * * *

(b) *Continuous duty motors more than one horsepower.* Each continuous duty motor rated more than one horsepower shall be protected against overcurrent by one of the means covered in this paragraph. For multi-speed motors each separate winding or winding connection shall be considered separately.

(1) A separate overcurrent device which is responsive to motor current. This device shall be rated or set at not more than 115 percent of the motor full-load current rating. For multi-speed motors this device shall be rated or set at not more than 115 percent of the full-load current rating of each separate winding or winding connection. This value may be modified as permitted by paragraph (g) of this section.

(2) A thermal protector integral with the motor, approved for use with the motor which it protects on the basis that it will prevent dangerous overheating of the motor due to overload or failure to start. If the motor current interrupting device is separate from the motor and its control circuit is operated by a protective device integral with the motor, it shall be so arranged that the opening of the control circuit will result in interruption of current to the motor.

(3) For sealed (hermetic-type) refrigeration motors the protective device specified in subparagraph (1) or (2) of this paragraph shall be rated or set to trip at not more than 125 percent of the motor full-load line.

* * * * *

(k) *Number of conductors disconnected by overcurrent devices.* Motor-running protective devices, other than fuses, thermal cutouts, or thermal protectors, shall simultaneously open a sufficient number of ungrounded conductors to interrupt current flow to the motor.

* * * * *

(p) *Steering gear motors.* Main steering gear motors and motors associated with steering control systems shall not be provided with a motor-running protective device. In lieu of a motor-running overcurrent protection, the motor starter shall be fitted with a protective device responsive to motor current, motor temperature, or to both current and temperature which will operate an indicating light at the propulsion control station in case of overload which would cause overheating of the motor. This device shall follow as closely as practicable the temperature of the motor.

6. Section 111.45–10(b)(4) is amended by correcting the cross reference so that it will read as follows:

**§ 111.45–10 Remote control, electrical interlock, and indicator circuits.**

* * * * *

(b) *Overcurrent protection.* * * *

(4) For overcurrent protection of steering gear control and indicator light circuits see § 111.65–55(d)(2).

* * * * *

7. Section 111.45–20(h) is amended by revising the paragraph heading, and by revising subparagraphs (1) and (5) and by cancelling subparagraph (6), so that subparagraphs (1) and (5) read as follows:

**§ 111.45–20 Motor-branch-circuit overcurrent protection.**

* * * * *

(h) *Steering gear motor branch circuits*—(1) *General.* In lieu of the requirements of paragraphs (a) to (f), inclusive, of this section, each steering gear branch circuit shall be protected only by a circuit breaker with instantaneous trip located on the switchboard from which it emanates.

* * * * *

(5) *General considerations.* The requirements of this paragraph contemplate the following conditions:

(i) When two steering gear main motors are provided, one is a standby which normally runs only when started preparatory to change-over, and then without load.

(ii) Auxiliary motors (servo, replenishing and filling pumps, etc.), if and as required, have an aggregate rating of not more than 10 percent of the main steering gear motor rating.

(6) [Cancelled]

### Subpart 111.50—Distribution and Circuit Loads

8. Section 111.50–5(d) is amended to read as follows:

**§ 111.50–5 Ship's service power circuits.**

* * * * *

(d) *Steering gear circuits.* Electric and electro-hydraulic steering gear shall be served by two circuits from the ship's service switchboard except in special cases where the length of circuit is very short. One of the circuits may be taken from the emergency switchboard if the rating of the emergency generator is sufficient to supply the steering gear in addition to the emergency loads. The circuits shall be separated throughout their length as widely as practicable. Each circuit shall have adequate current-carrying capacity for supplying all motors and control equipment normally connected to it and which operate simultaneously.

* * * * *

9. Section 111.50–15(f)(1) is amended by deleting the last sentence so that the revised paragraph reads as follows:

**§ 111.50–15 Lighting branch circuits and lighting requirements.**

* * * * *

(f) *Receptacle outlets.* (1) A sufficient number of receptacle outlets shall be located throughout crew's accommodations to permit the use of electric razors,

radios, and the like without using portable cords of excessive length.

* * * * *

10. Section 111.50–20(b) is amended by adding a new subparagraph (5) reading as follows:

**§ 111.50–20 Circuit loads and demand factors.**

* * * * *

(b) *Motor branch circuits.* * * *

(5) *Individual multi-speed motors.* For multi-speed motors the conductors between the controller and the motor windings or winding connections shall have a current-carrying capacity of not less than 125 percent of the full-load current rating of the associated winding or winding connection.

* * * * *

## Subpart 111.60—Wiring Methods and Materials

11. Section 111.60–5 is amended by adding at the end thereof a new paragraph (j) reading as follows:

**§ 111.60–5 Portable electric cord and fixture wire.**

* * * * *

(j) *Hook-up wire, application.* Hook-up wire for use within the components of alarm panels, IC equipment, and electronic control equipment shall be in accordance with § 113.05–10 of this subchapter.

12. Section 111.60–15 is amended by revising paragraph (a) and by adding paragraph (f) to read as follows:

**§ 111.60–15 General requirements and wiring methods.**

(a) *Feeder and branch continuity.* Each feeder and each branch circuit cable supplying a single energy consuming appliance, shall be continuous throughout their lengths, except that a cable of large size or exceptional length may be spliced in a suitable junction box to effect greater ease of installation and except for cables that may be extended as permitted by paragraph (f) of this section.

* * * * *

(f) *Extending feeder and branch circuit cables.* Existing feeder and branch circuit cables may be extended for vessels receiving major alterations provided the requirements of this paragraph are met.

(1) The cables shall be spliced in suitable junction boxes.

(2) Each vital and emergency circuit shall be spliced in individual, suitable junction boxes.

(3) Circuits of different voltages shall not be extended by means of a common cable or junction box.

(4) Existing cables of less than 25 feet in length shall not be extended but shall be replaced.

## Subpart 111.65—Special Requirements for Certain Locations and Systems

13. Section 111.65–30(c)(2) is amended by adding a sentence at the end thereof so this subparagraph reads as follows:

**§ 111.65–30 Special requirements for electric power-operated water-tight door system.**

* * * * *

(c) *Power supplies.* * * *

(2) If the peak current resulting from the simultaneous starting of all doors is too great for the temporary or final source of supply, the control shall be so arranged that when the central master switch is put to "close" the doors will start to close serially at intervals of not more than 3 seconds, preference being given to the doors starting with those in the lowest part of the vessel. The total time for all doors to be closed shall not exceed 60 seconds.

* * * * *

14. Subpart 111.65 is amended by adding after § 111.65–50 a new § 111.65–55 reading as follows:

**§ 111.65–55 Special requirements for electric steering gears.**

(a) *General.* This section contains requirements for steering gear installations where the main or both the main and auxiliary steering means is electric power driven and where the steering control means is electric powered. Where two steering gear power motors and two separate and independent means for controlling the rudder from the pilothouse are provided, there will be two steering systems, each consisting of a power motor, control system, and steering gear feeder. In general these two systems are to be separate on a port and starboard basis. For any different arrangement of the steering gear system, special consideration and approval will be required with the intent of obtaining a steering installation which will be equivalent to the one covered in this section.

(b) *Disconnecting and switching means.* (1) The steering gear power motors and control systems shall be connected to the respective steering gear branch circuits in the steering gear room. Separate means shall be provided in the steering gear room for disconnecting the motor and control systems from the power source.

(2) If a means of transfer is provided in the steering gear room so arranged that either steering gear power motor and associated control system can be connected to either of the two steering gear branch circuits, interlocks shall be provided to prevent both steering systems from being connected to the same branch circuit simultaneously.

(c) *Control of steering gear motors and steering control systems.* (1) Means shall be provided in the steering gear room for starting and stopping the steering gear power motors and any motors that are part of the pilothouse control system.

(2) Where two separate and independent steering control systems are installed, the means of switching shall be provided in the pilothouse to select the steering control system which is to be used for steering. This selection shall be accomplished by one operating handle but the switches for each system shall be in separate enclosures or shall be separated by suitable fire-resistant barriers. The handle shall have positions for "port control", "off", and "starboard control" with such an arrangement to necessitate the passing through the "off" position when transferring from one steering system to the other.

(3) The selecting means in the pilothouse shall be so arranged that the steering gear power motor for the steering system selected will automatically be started if not already running. Any ancillary device necessary to activate the selected remote means for controlling the rudder shall be automatically operated upon starting the steering gear power motor.

(d) *Overcurrent protection for steering systems.* (1) Short circuit protection only shall be provided for the control circuits of controllers of steering gear power motors and motors used for control systems. This protection shall be instantaneous and rated at 400–500 percent of the current-carrying capacity of the conductors.

(2) Indicating and alarm circuits associated with steering installations shall be provided with overcurrent protection in accordance with § 111.45–10(b)(2). Pilothouse steering control systems and any other electric means for controlling the rudder remote from the steering gear room shall be provided with short circuit protection only. The protection shall be instantaneous and rated at 400–500 percent of the current-carrying capacity of the control system conductors. The protection means shall be located in the steering gear room just after the disconnecting means required by paragraph (b)(1) of this section.

(e) *Indicating and alarm systems for steering installations.* (1) A pilot light for each steering gear power motor and each auxiliary motor vital to the control of the rudder shall be provided at the propulsion control station, and other locations if desired, to indicate when the motors are energized.

(2) For the requirements pertaining to overload indicating lights for steering gear pilot motors, see § 111.45–5(p)(1).

(3) The opening of a steering gear branch-circuit circuit breaker shall automatically be indicated at the propulsion control station by the sounding of an audible alarm.

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4421, as amended, 4426, as amended, 4427, as amended, 4433, as amended, 4453, as amended, 4488, as amended, sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, sec. 5, 49 Stat. 1384, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 399, 404, 405, 411, 435, 481, 366, 395, 363, 369, 367, 1333, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8025; CGFR 56–28, July 24, 1956, 21 F.R. 4894; 167–38, Oct. 26, 1959, 24 F.R. 8857)

## PART 112—EMERGENCY LIGHTING AND POWER SYSTEM

### Subpart 112.05—General Requirements

1. Section 112.05–5(d) is amended to read as follows:

**§ 112.05–5 Emergency source of supply.**

* * * * *

(d) The emergency source of supply shall be located aft of the collision bulkhead and outside the machinery casing.

(1) On passenger vessels the emergency source of supply shall be located above the bulkhead deck or above the freeboard deck, whichever is the higher.

(2) On cargo and miscellaneous vessels, including tankships and barges, the emergency source of supply shall be located above the freeboard deck, or above the uppermost continuous deck, whichever is the higher.

* * * * *

### Subpart 112.55—Storage Battery Installation

2. Section 112.55–5(a) is amended to read as follows:

**§ 112.55–5 Emergency lighting loads.**

(a) When supplying emergency lighting loads, the storage battery initial voltage shall not exceed the standard system voltage by more than 5 percent.

3. Section 112.55–15(a) is amended to read as follows:

**§ 112.55–15 Capacity of storage battery.**

(a) The capacity of a storage battery shall be ample to close each watertight door three times and to open each watertight door two times, and to carry the remaining emergency loads continuously for the duration of time required by § 112.05–5(a), at the end of which time the potential of the storage battery shall be not less than 87.5 percent of standard system voltage. The nominal potential of a lead-acid storage battery will be taken as 2.0 volts per cell; the nominal potential of nickel-alkaline storage batteries will be taken as from 1.2 to 1.4 volts per cell.

4. Subpart 112.55 is amended by adding after § 112.55–15 a new section reading as follows:

**§ 112.55–20 Diesel engine cranking batteries.**

(a) Batteries used for starting emergency diesel engine generator sets shall be either the lead-acid or nickel-cadmium type.

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4421, as amended, 4426, as amended, 4427, as amended, 4433, as amended, 4453, as amended, 4488, as amended, sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, sec. 5, 49 Stat. 1384, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 399, 404, 405, 411, 435, 481, 366, 395, 363, 369, 367, 1333, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; CGFR 56–28, July 24, 1956, 21 F.R. 4894; 167–38, Oct. 26, 1959, 24 F.R. 8857)

## PART 113—COMMUNICATION AND ALARM SYSTEMS AND EQUIPMENT

### Subpart 113.05—General Provisions

Subpart 113.05 is amended by adding after § 113.05–5 a new section reading as follows:

**§ 113.05–10 Wiring.**

(a) Hook-up wire for use within the components of the equipment specified in this part shall be of soft stranded annealed copper of suitable cross section to provide ample and safe current carrying capacity and mechanical strength. Hook-up wire shall be in accordance with MIL–W–76, MIL–W–16878 types B, C, D, E, EE, and FF, or with Subpart 111.60 of this subchapter.

(b) All external wiring and wiring between components shall be in accordance with Subpart 111.60 of this subchapter.

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4399, as amended, 4400, as amended, 4417, as amended, 4417a, as amended, 4418, as amended, 4421, as amended, 4426, as amended, 4427, as amended, 4433, as amended, 4453, as amended, 4488, as amended, sec. 14, 29 Stat. 690, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, sec. 5, 49 Stat. 1384, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 54 Stat. 347, as amended, 68 Stat. 675; 46 U.S.C. 361, 362, 391, 391a, 392, 399, 404, 405, 411, 435, 481, 366, 395, 363, 369, 367, 1333, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917, 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; CGFR 56–28, July 24, 1956, 21 F.R. 4894; 167–38, Oct. 26, 1959, 24 F.R. 8857)

## SUBCHAPTER Q—SPECIFICATIONS

## PART 160—LIFESAVING EQUIPMENT

### Subpart 160.060—Buoyant Vests, Unicellular Polyethylene Foam, Adult and Child, for Motorboats of Classes A, 1, or 2 Not Carrying Passengers for Hire

Part 160 is amended by inserting after § 160.056–7 a new Subpart 160.060, consisting of §§ 160.060–1 to 160.060–9, inclusive, reading as follows:

Sec.


160.060–1 Applicable specifications and plans.
160.060–2 Types and models.
160.060–3 Materials—Type I vest.
160.060–4 Materials—Type II vest.
160.060–5 Construction—Type I vest.
160.060–6 Construction—Type II vest.
160.060–7 Inspections and tests—Types I and II vests.
160.060–8 Marking—Types I and II vests.
160.060–9 Procedure for approval—Types I and II vests.


AUTHORITY: The provisions of this Subpart 160.060 issued under R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply secs. 6, 17, 54 Stat. 164, as amended, 166, as amended; 46 U.S.C. 526e, 526p. Treasury Department Order 120, July 31, 1950, 15 F.R. 6521.

**§ 160.060–1 Applicable specifications and plans.**

(a) *Specifications.* The following specifications, of the issue in effect on the date buoyant vests are manufactured, form a part of this subpart:

(1) *Federal specifications.*

V–T–276—Thread, Cotton.
CCC–T–191b—Textile Test Methods.
DDD–S–751—Stitches; Seams; and Stitching.

(2) *Military specifications.*

MIL–W–530—Webbing, Textile, Cotton, General Purpose Natural or in Colors.

(3) *Coast Guard specification.*

164.013—Foam, unicellular polyethylene (buoyant, slab, slitted trigonal pattern).

(b) *Plans.* The following plans, of the issue in effect on the date buoyant vests are manufactured, form a part of this subpart:

Dwg. No. 160.060–1:
Sheet 1—Cutting Pattern and General Arrangement, Model AY.
Sheet 2—Cutting Pattern and General Arrangement, Model CYM.
Sheet 3—Cutting Pattern and General Arrangement, Model CYS.
Sheet 4—Insert Pattern, Model AY.
Sheet 5—Insert Pattern, Model CYM.
Sheet 6—Insert Pattern, Model CYS.

(c) *Copies on file.* Copies of the specifications and plans referred to in this section shall be kept on file by the manufacturer together with the Certificate of Approval.

(1) The Coast Guard specifications and plans may be obtained upon request from the Commandant, United States Coast Guard, Washington, D.C., 20226.

(2) The Federal specifications may be purchased from the Business Service Center, General Services Administration, Washington, D.C., 20407.

(3) The military specifications may be obtained from the Commanding Officer, Naval Supply Depot, Scotia, N.Y., 13147.

**§ 160.060–2 Types and models.**

(a) Buoyant vests specified by this subpart shall be of the following types and models:

(1) *Type I—Standard.*

Model AY—Adult.
Model CYM—Child, Medium (For children weighing approximately 45 to 90 pounds).
Model CYS—Child, Small (For children weighing less than approximately 50 pounds).

(2) *Type II—Non-standard.*

Model [1]—Adult.
Model [1]—Child, Medium (For children weighing approximately 45 to 90 pounds).
Model [1]—Child, Small (For children weighing less than approximately 50 pounds).

**§ 160.060–3 Materials—Type I vests.**

(a) *General.* The requirements for materials specified in this section are minimum requirements, and consideration will be given to the use of alternate

[1] Model designations for Type II, non-standard vests to be assigned by individual manufacturers. Designations shall differ from those of the standard models.

materials in lieu of those specified. Detailed technical data and samples of all proposed alternate materials shall be submitted for approval prior to being incorporated in the finished product.

(b) *Unicellular polyethylene foam.* The unicellular polyethylene foam shall be all new material complying with Subpart 164.013 of this subchapter, and for each lot of the foam used the vest manufacturer shall obtain from the manufacturer of the foam a certification that it complies with these requirements.

(c) *Envelope.* The buoyant vest envelope, or cover, shall be made from 39", 2.85 cotton jeans cloth, with a thread count of approximately 96 x 64. The finished goods shall weigh not less than 4.2 ounces per square yard, shall have thread count of not less than 94 x 60, and shall have a breaking strength of not less than 85 pounds in the warp and 50 pounds in the filling. Other cotton fabrics having a weight and breaking strength not less than the above will be acceptable. There are no restrictions as to color, but the fastness of the color to laundering, water, crocking, and light shall be rated "good" when tested in accordance with Federal Specification CCC-T-191b, Methods 5610, 5630, 5650, and 5660.

(d) *Tie tapes and straps.* The tie tapes and body strap loops for both adult and child sizes shall be ¾" cotton webbing meeting the requirements of Specification MIL-W-530 for Type I webbing. The body straps for adult size vests shall be 1" Type IIa webbing, and the body straps for child size shall be ¾" Type IIa webbing.

(e) *Dee rings and snap hooks.* The dee rings and snap hooks shall be of a size consistent with the webbing on which they are used and shall be of corrosion-resistant material or protected against corrosion by a corrosion-resistant plating.

(f) *Thread.* The thread shall be Type IB, No. 20, 4-ply cotton thread conforming to the requirements of Federal Specification V-T-276.

**§ 160.060–4 Materials—Type II vests.**

(a) *General.* All materials used in non-standard Type II buoyant vests shall be at least equivalent to those specified in § 160.060–3 for standard Type I vests.

**§ 160.060–5 Construction—Type I vests.**

(a) *General.* This specification covers buoyant vests which essentially consist of a fabric envelope in which are enclosed inserts of buoyant material arranged and distributed so as to provide the flotation characteristics and buoyancy required to hold the wearer in an upright or slightly backward position with head and face out of water. The buoyant vests are also fitted with straps and hardware to provide for proper adjustment and close and comfortable fit to the bodies of various size wearers.

(b) *Envelope.* The envelope or cover shall be made of three pieces. Two pieces of fabric shall be cut to the pattern shown on Dwg. No. 160.060–1, Sheet 1 for the adult size, and Sheets 2 and 3 for child sizes, and joined together with a third piece which forms a 2¼" finished gusset strip all around. Reinforcing strips of the same material as the envelope shall be stitched to the inside of the front piece of the envelope in way of the strap attachments as shown by the drawings.

(c) *Buoyant inserts.* The unicellular plastic foam buoyant inserts shall be cut and formed as shown on Dwg. No. 160.060–1, Sheets 4, 5, and 6 for the adult, child medium, and child small sizes, respectively.

(d) *Tie tapes, straps, and hardware.* The tie tapes, straps, and hardware shall be arranged as shown on the drawings and attached to the envelope with the seams and stitching indicated.

(e) *Stitching.* All stitching shall be short lock stitch conforming to Stitch Type 301 of Federal Specification DDD-S-751, and there shall be not less than 7 nor more than 9 stitches to the inch.

(f) *Pockets.* Pockets are not required on buoyant vests, but may be placed on them if desired, provided they do not interfere with the adjustment or fit of the vest.

(g) *Workmanship.* Buoyant vests shall be of first-class workmanship and shall be free from any defects materially affecting their appearance or serviceability.

**§ 160.060–6 Construction—Type II vests.**

(a) *General.* Construction methods used in nonstandard Type II buoyant vests shall be at least equivalent to those specified in § 160.060–5 for standard Type I vests. Type II vests shall also meet the additional requirements specified below.

(b) *Sizes.* Type II vests shall be constructed in sizes which correspond to those specified in § 160.060–2 for Type I vests, i.e., adult, child medium and child small.

(c) *Volume of buoyant material.* Adult size Type II vests shall contain not less than 500 cubic inches of unicellular polyethylene foam buoyant material; child medium size vests not less than 350 cubic inches; and child small size vests not less than 225 cubic inches. The volume of the inserts shall be determined by the displacement method.

(d) *Arrangement of buoyant material.* The buoyant material in Type II vests shall be located and arranged so as to hold the wearer in an upright or backward position with head and face out of water. They shall show no tendency to turn a wearer face downward in the water, and at least 70 percent of the total buoyant material in any Type II vest shall be located in the front of the vest.

(e) *Adjustment, fit and donning.* Type II vests shall be capable of being readily and easily adjusted to fit the range of wearers for which designed, and donning time by uninitiated persons shall compare favorably with that of standard Type I vests.

**§ 160.060–7 Inspections and tests—Types I and II vests.**

(a) *General.* Buoyant vests are not inspected at regularly scheduled factory inspections; however, the Commander of the Coast Guard District may detail a marine inspector at any time to visit any place where buoyant vests are manufactured to observe production methods and to conduct any inspections or tests which may be deemed advisable. The marine inspector shall be admitted to any place in the factory where work is done on buoyant vests or component materials, and samples of materials entering into construction may be taken by the marine inspector and tests made for compliance with the applicable requirements.

(b) *Manufacturer's inspections and tests.* Manufacturers of approved buoyant vests shall maintain quality control of the materials used, manufacturing methods, workmanship, and the finished product so as to meet the requirements of this specification, and shall make full inspections and tests of representative samples from each lot to maintain the quality of their product. At least one sample vest from each lot shall be tested for buoyancy by the manufacturer in accordance with the procedure set forth in paragraph (e) of this section. The records of such buoyancy tests shall be kept on file by the manufacturer and shall be made available to the Coast Guard marine inspector upon demand.

(c) *Lot size.* A lot shall consist of not more than 500 buoyant vests of the same type and model. Lots shall be numbered serially by the manufacturer, and if at any time during the manufacture of a lot, any change or modification in materials or production methods is made, a new lot shall be started.

(d) *Test facilities.* The manufacturer shall provide a suitable place and shall have on hand the necessary apparatus for conducting buoyancy tests in compliance with this specification. The apparatus shall include accurate spring scales of adequate capacity, weighted wire mesh baskets, and a test tank or tanks which can be locked or sealed in such a manner as to preclude disturbance of buoyant vests undergoing tests or change in water level.

(e) *Buoyancy*—(1) *Buoyancy test method.* Remove the buoyant inserts from the vests. Securely attach the spring scale in a position directly over the test tank. Suspend the weighted wire basket from the scale in such a manner that the basket can be weighed while it is completely under water. In order to measure the actual buoyancy provided by the inserts, the underwater weight of the empty basket should exceed the buoyancy of the inserts. To obtain the buoyancy of the inserts, proceed as follows:

(i) Weigh the empty wire basket under water.

(ii) Place the inserts inside the basket and submerge it so that the top of the basket is at least 2 inches below the surface of the water. Allow the inserts to remain submerged for 24 hours. The tank shall be locked or sealed during this 24-hour submergence period. It is important that after the inserts have once been submerged they shall remain submerged for the duration of the test, and at no time during the course of the test shall they be removed from the tank or otherwise exposed to air.

(iii) After the 24-hour submergence period, unlock or unseal the tank and

weigh the wire basket with the inserts inside while both are still underwater.

(iv) The buoyancy is computed as subdivision (i) of this subparagraph minus subdivision (iii) of this subparagraph.

(2) *Buoyancy required.* The buoyant inserts from adult size buoyant vests shall provide not less than 15½ pounds of buoyancy in fresh water; the inserts from the child medium size buoyant vests shall provide not less than 11 pounds buoyancy; and the inserts from the child small size buoyant vests shall provide not less than 7 pounds buoyancy.

(f) *Additional tests for Type II vests.* For Type II vests additional tests such as tests to determine performance in the water, extended service tests to determine suitability of materials, tests to determine comparative donning time and ease of adjustment, and such other tests as may be necessary to determine equivalence to the standard Type I vests may be required prior to approval. The costs of such additional tests will be payable by the manufacturer.

**§ 160.060–8 Marking—Types I and II vests.**

(a) *General.* Each buoyant vest shall be marked with a rectangular cloth tag attached to the envelope by stitching along all edges of the tag. The following information shall be plainly printed in waterproof ink on each tag:

TYPE (I OR II)

BUOYANT VEST

MODEL _____
ADULT (OR CHILD)

Approved for use on motorboats of Classes A, 1, or 2 not carrying passengers for hire.

U.S. COAST GUARD APPROVAL NO. _____
Lot No. _____

This vest is filled with unicellular polyethylene foam, which repeated wettings will not injure. When vest is wet, hang up and dry thoroughly.

(Name and address of manufacturer)

(b) *Additional marking for child size vests.* For child medium size buoyant vests, the following additional wording shall be included on the marking tag: "For Children Weighing Approximately 45 to 90 Pounds." For child small size buoyant vests, the following additional wording shall be included on the marking tag: "For Children Weighing less than Approximately 50 Pounds".

(c) *Waterproofness of marking tags.* Marking tags for buoyant vests shall be sufficiently waterproof so that after 48 hours submergence in water, they will withstand rubbing by hand with moderate pressure while wet without the printed matter becoming illegible.

**§ 160.060–9 Procedure for approval—Types I and II vests.**

(a) *General.* Buoyant vests for use on motorboats are approved only by the Commandant, U.S. Coast Guard, Washington, D.C., 20226. Each model vest is considered separately. Application for approval and correspondence pertaining to this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Approval of Type I vests.* Upon receipt of an application for approval of standard Type I vests, the Commander of the Coast Guard District will detail a marine inspector to the factory to observe the production facilities and manufacturing methods and to select from not less than ten buoyant vests already manufactured not less than three of each model for examination and test for compliance with the requirements of this specification. A copy of the marine inspector's report, together with a fourth specimen vest and one set of buoyant inserts selected from those already manufactured will be forwarded to the Commandant, and if satisfactory, an official approval number will be assigned to the manufacturer for the Type I vests submitted.

(c) *Approval of Type II vests.* Upon receipt of an application for approval of non-standard Type II vests, the Commander of the Coast Guard District will detail a marine inspector to the factory to observe the production facilities and manufacturing methods and to select three sample vests of each model and one set of buoyant inserts for each model for which approval is desired. The sample vests and inserts will be forwarded to the Commandant, together with a copy of the marine inspector's report. At the time the pre-approval samples are selected, the manufacturer shall also submit to the marine inspector four prints each of fully-dimensioned, full scale drawings showing all details of construction of the sample vests submitted, and four copies of a bill of material showing all materials used in the construction of the vests. After examination of the samples, drawings, and other material submitted, the manufacturer will be advised of any changes or corrections considered necessary. The manufacturer will also be informed of the tests that will be required, any additional samples or other material required, and the estimated cost of the tests. Upon payment by the manufacturer of the estimated costs of the tests, the tests will be authorized. If the results of the tests are satisfactory, an official approval number will be assigned to the manufacturer for the Type II vests submitted.

## PART 162—ENGINEERING EQUIPMENT

### Subpart 162.028—Extinguishers, Fire, Portable, Marine Type

Section 162.028–4(a) is amended to read as follows:

**§ 162.028–4 Marine type label.**

(a) In addition to all other marking, every portable extinguisher shall bear a label containing the "marine type" listing manifest issued by a recognized laboratory. This label will include the classification of the extinguisher in accordance with the Coast Guard classification system, and the Coast Guard approval number, thus: "Marine Type USCG Type _____, Size _____, Approval No. 162.028/_____." All such labels are to be obtained from the recognized laboratory and will remain under its control until attached to product found acceptable under its listing and labeling program.

(R.S. 4405, as amended, and 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417a, as amended, 4426, as amended, 4488, as amended, 4491, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, secs. 8, 17, 54 Stat. 165, as amended, 166, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 70 Stat. 152, sec. 4, 67 Stat. 462, and sec. 3, 68 Stat. 675; 46 U.S.C. 391a, 404, 481, 489, 367, 526g, 526p, 1333, 390b, 43 U.S.C. 1333, 50 U.S.C. 198; E.O. 10402, 17 F.R. 9917; 3 CFR, 1952 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167–14, Nov. 26, 1954, 19 F.R. 8026; 167–15, Jan. 3, 1955, 20 F.R. 840; 167–20, June 18, 1956, 21 F.R. 4894; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857)

## PART 164—MATERIALS

### Subpart 164.013—Foam, Unicellular Polyethylene (Buoyant, Slab, Slitted Trigonal Pattern) for Motorboats of Classes A, 1, or 2 Not Carrying Passengers for Hire

Part 164 is amended by adding a new Subpart 164.013, consisting of §§ 164.013–1 to 164.013–5, inclusive, reading as follows:

Sec.
164.013–1 Applicable specifications and plans.
164.013–2 Grades.
164.013–3 Material and workmanship.
164.013–4 Inspections and tests.
164.013–5 Procedure for approval.

AUTHORITY: The provisions of this Subpart 164.013 issued under R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply secs. 6, 17, 54 Stat. 164, as amended, 166, as amended; 46 U.S.C. 526e, 526p. Treasury Department Order 120, July 31, 1950, 15 F.R. 6521.

**§ 164.013–1 Applicable specifications and plans.**

(a) *Specifications and plan.* The following specifications and plan, of the issue in effect on the date the plastic foam material is manufactured, form a part of this subpart:

(1) Federal test method standard.

No. 601—Rubber: Sampling and Testing.

(2) Military specification.

MIL–P–40619—Plastic Material, Cellular, Polystyrene.

(3) A.S.T.M. specification standard.

D–1564—Sections 42 to 46: Density Determination.

(4) Plan.

Dwg. 164.013–1—Pattern, Trigonal Slit, for Polyethylene Foam Slab Material.

(b) *Copies on file.* Copies of the specifications and plans referred to in this section shall be kept on file by the manufacturer together with the Certificate of Approval.

(1) The Coast Guard specifications and plans may be obtained upon request from the Commandant, United States Coast Guard, Washington, D.C., 20226.

(2) The federal testing method standards may be purchased from the Business Service Center, General Services Administration, Washington, D.C., 20407.

(3) The military specifications may be obtained from the Commanding Officer, Naval Supply Depot, Scotia, N.Y., 13147.

(4) The A.S.T.M. specification standards may be purchased from the American Society for Testing Materials, 1916 Race Street, Philadelphia, Pa.

**§ 164.013–2 Grades.**

(a) Unicellular polyethylene foam shall be of but one grade as specified in this subpart.

**§ 164.013–3 Material and workmanship.**

(a) The unicellular polyethylene foam shall be all new material complying with the requirements outlined in this specification. The results of the tests described in § 164.013–4 shall yield property values within the limits shown in table in § 164.013–4(a).

(b) The manufacturer of the unicellular polyethylene foam shall incorporate a color throughout the material to provide identification. The choice of this color shall be subject to Coast Guard acceptance as a means of identifying the various manufacturers.

(c) The unicellular polyethylene foam shall be produced in slabs with a thickness of 1⅛" (+⅛", −0"). One surface of the foam sheet shall be slitted with the trigonal pattern shown on Dwg. No. 164.013–1. The slits of the trigonal pattern shall be cut to a depth that leaves an unslit portion of material ⅛" (+1/16", −0") in thickness. The width of the slits shall be 0.000" to 0.035".

**§ 164.013–4 Inspections and tests.**

(a) *General.* Unicellular polyethylene foam to be used in a finished product subject to inspection by the Coast Guard shall also be subject to inspection at the plant where the foam is manufactured. The manufacturer of the foam has primary responsibility for quality control over the production of the foam. A marine inspector shall be admitted to any place in the factory where production or partial processing of the foam takes place, and he may take samples of the foam or other materials for further inspections or tests. The manufacturer shall provide a suitable place and the apparatus necessary for the performance of certain tests to be witnessed by the marine inspector, the results of which shall comply with the table in this paragraph. The following properties shall be determined on specimens of the sheet foam which have not been finished with the trigonal pattern slits described in § 164.013–3(c):

TABLE 164.013–4(a)—PROPERTY VALUES OF UNICELLULAR POLYETHYLENE FOAM

| Property | Test reference | Value |
|---|---|---|
| Density, pounds per cubic foot. | ASTM D 1564, sections 42 to 46. | 1.9 to 2.6. |
| Compression Deflection at 10%, psi (maximum). | Method 12151 of Fed. Std. Test Method No. 601. | 8.0. |
| Water absorption, lbs. per square foot of cut surface (maximum). | MIL–P–40619, para. 4.5.7. | 0.08. |
| Buoyancy in fresh water, lbs. per cubic foot (minimum). | § 164.013–4(e) | 55. |
| Volume loss on heat aging, percent (maximum). | MIL–P–40619, para. 4.5.9. | 3.0. |
| Oil resistance | MIL–P–40619, para. 4.5.10. | No softening or swelling. |
| Odor at room temperature. | § 164.013–4(g) | Not objectionable. |
| Compression set, percent of original thickness (maximum). | § 164.013–4(i) | 10.0. |

(b) *Density.* The density of the material shall be determined from specimens of sheet foam that have not been finished with the trigonal slit pattern described in § 164.013–3(c). The density of the material shall be determined by the method described in A.S.T.M. D 1564, sections 42 to 46.

(c) *Compression deflection.* Compression deflection shall be determined in accordance with Method 12151 of Federal Test Method Standard No. 601, except that the test specimens shall be compressed to 10 percent of their original thicknesses by compression forces applied at a rate of 0.5 inches per minute.

(d) *Water absorption.* Water absorption of the material shall be determined in accordance with paragraph 4.5.7 of MIL–P–40619.

(e) *Buoyancy in fresh water.* The buoyancy test shall be made with a sample of the material measuring approximately 1⅛" x 12" x 12". Securely attach a spring scale in a position directly over a test tank. Suspend a weighted wire basket from the scale in such a manner that the basket can be weighed while completely submerged under water. Proceed as follows:

(1) Weigh the empty wire basket under water.

(2) Place the sample inside the basket and submerge it so that the top of the basket is at least 2 inches below the surface of the water. Allow the samples to remain submerged 24 hours.

(3) After the 24 hour submergence period, weigh the wire basket with the sample inside while both are still under water.

(4) The buoyancy is computed as subparagraph (1) of this paragraph minus subparagraph (3) of this paragraph. The resulting value is divided by the volume of the polyethylene foam expressed in cubic feet. The final result is in lbs./cubic feet.

(f) *Volume loss on heat aging.* The volume loss shall be determined according to par. 4.5.9 of Military Specification MIL–P–40619.

(g) *Oil resistance.* The resistance to Navy grade fuel oil shall be determined according to para. 4.5.10 of Military Specification MIL–P–40619.

(h) *Odor.* The odor of unicellular polyethylene foam shall be determined by sniffing.

(i) *Compression set.* The compression set shall be measured one hour after removal of a 10-pound weight which has been applied to a sample approximately 1" x 1" x 1" for one hour at room temperature. The compression set shall be calculated by means of the following formula:

$$\text{Compression set (percent)} = \frac{t_o - t_f \times 100}{t_o} \quad (1)$$

where:

$t_o$ = original thickness.
$t_f$ = final thickness.

(j) *Acceptance.* Acceptance of unicellular polyethylene foam prior to being incorporated into finished products, or during the course of manufacture, shall in no case be construed as a guarantee of the acceptance of the finished product.

**§ 164.013–5 Procedure for approval.**

(a) Unicellular polyethylene foam is not subject to formal approval, but will be accepted by the Coast Guard on the basis of this subpart for use in the manufacture of lifesaving equipment utilizing it.

(b) The manufacturer of the foam shall provide the manufacturer of the lifesaving equipment with an affidavit stating that the foam conforms to all of the requirements of this subpart.

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SUBCHAPTER R—NAUTICAL SCHOOLS

## PART 167—PUBLIC NAUTICAL SCHOOLSHIPS

### Subpart 167.15—Inspection

**§ 167.15–10 [Amended]**

1. Section 167.15–10 *Application for annual inspection,* is amended by changing the number and title of the described form from "Form CG–833, Application for Inspection of Vessel" to "Form CG–3752, Application for Inspection of U.S. Vessel."

### Subpart 167.30—Repairs or Alterations

2. Section 167.30–10 is amended to read as follows:

**§ 167.30–10 Special operating requirements.**

Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions are as follows:

(a) The provisions of "Standard for the Control of Gas Hazards on Vessels to be Repaired", NFPA No. 306, published by National Fire Protection Association, 60 Batterymarch Street, Boston, Mass., shall be used as a guide in conducting the inspections and issuance of certificates required by this section.

(b) Until an inspection has been made to determine that such operation can be undertaken with safety, no alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions shall be made:

(1) Within or on the boundaries of cargo tanks which have been used to carry combustible liquids or chemicals in bulk; or,

(2) Within spaces adjacent to cargo tanks which have been used to carry Grade D combustible liquid cargo, except where the distance between such cargo tanks and the work to be performed is not less than twenty-five (25) feet; or,

(3) Within or on the boundaries of fuel tanks; or,

(4) To pipe lines, heating coils, pumps, fittings, or other appurtenances connected to such cargo or fuel tanks.

(c) Such inspections shall be made and evidenced as follows:

(1) In ports or places in the United States or its territories and possessions, the inspection shall be made by a marine chemist certificated by the National Fire Protection Association; however, if the services of such certified marine chemist are not reasonably available, the Officer

in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor or their representative, shall select a person who, in the case of an individual vessel, shall be authorized to make such inspection. If the inspection indicates that such operations can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, shall be issued by the certified marine chemist or the authorized person before the work is started. Such qualifications shall include any requirements, as may be deemed necessary to maintain, insofar as can reasonably be done, the safe conditions in the spaces certified throughout the operation and shall include such additional tests and certifications as considered required. Such qualifications and requirements shall include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in such a port or place, and a marine chemist or such person authorized by the Officer in Charge, Marine Inspection, is not reasonably available, the inspection shall be made by the senior officer present and a proper entry shall be made in the vessel's logbook.

(d) It shall be the responsibility of the senior officer present to secure copies of certificates issued by the certified marine chemist or such person authorized by the Officer in Charge, Marine Inspection. It shall be the responsibility of the senior officer present, insofar as the persons under his control are concerned, to maintain a safe condition on the vessel by full observance of all qualifications and requirements listed by the marine chemist in the certificate.

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417a, as amended, 4426, as amended, 4427, as amended, 4438, as amended, 4438a, as amended, 4439, as amended, 4440, as amended, 4441, as amended, 4442, as amended, 4443, as amended, 4445, as amended, sec. 2, 29 Stat. 188, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 3, 70 Stat. 152, and sec. 3, 68 Stat. 675; 46 U.S.C. 391a, 404, 405, 224, 224a, 226, 228, 229, 230, 231, 225, 237, 367, 390b, 50 U.S.C. 198. Treasury Department Orders 167-14, Nov. 26, 1954, 19 F.R. 8026; 167-20, June 18, 1956, 21 FR. 4894)

## SUBCHAPTER T—SMALL PASSENGER VESSELS (UNDER 100 GROSS TONS)

## PART 176—INSPECTION AND CERTIFICATION

### Subpart 176.01—Certificate of Inspection

**§ 167.01-10 [Amended]**

1. Paragraph (a) of § 176.01-10 *How to obtain and renew,* is amended by changing the number and title of a form from "Form CG-3752, Application for Inspection of Small Passenger Vessel" to "Form CG-3752, Application for Inspection of U.S. Vessel."

2. Section 176.01-35(b) is amended to read as follows:

**§ 176.01-35 Certificate of inspection amendment.**

* * * * *

(b) Notification and a request for a certificate of inspection amendment shall be made to the Officer in Charge, Marine Inspection, having jurisdiction, by the operator, owner, or agent of the vessel at any time there is a change in the character of a vessel or in her route, equipment, ownership, etc., as specified in her certificate of inspection previously issued and currently valid.

* * * * *

(R.S. 4405, as amended, 4462, as amended, sec. 3, 70 Stat. 152; 46 U.S.C. 375, 416, 390b. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4421, as amended, 4426, as amended, 4453, as amended, 4464, as amended, 4466, as amended, 4488, as amended; 46 U.S.C. 391, 392, 399, 404, 435, 451, 453, 481. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167-20, June 18, 1956, 21 F.R. 4894; CGFR 56-28, July 24, 1956, 21 F.R. 5659)

## PART 182—MACHINERY INSTALLATION

### Subpart 182.20—Machinery Using Diesel Fuel

Section 182.20-25(a)(5) is amended to read as follows:

**§ 182.20-25 Independent diesel fuel tanks.**

(a) *Material and construction.* * * *

(5) Nozzles, flanges or other fittings for pipe connections shall be welded or brazed to the tank. The tank opening in way of pipe connections shall be properly reinforced where necessary. Where liquid level indicating gages are installed, they shall be of heat resistant materials, adequately protected from mechanical damage and provided at the tank connections with devices which will automatically close in the event of rupture of the gage or gage lines.

* * * * *

(R.S. 4405, as amended, 4462, as amended, sec. 3, 70 Stat. 152; 46 U.S.C. 375, 416, 390b. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4426, as amended, 4433, as amended, 4453, as amended, 4488, as amended, secs. 11, 17, 54 Stat. 165, as amended, 166, as amended; 46 U.S.C. 391, 392, 404, 411, 435, 481, 526j, 526p. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167-20, June 18, 1956, 21 F.R. 4894; CGFR 56-28, July 24, 1956, 21 F.R. 5659; 167-38, Oct. 26, 1959, 24 F.R. 8857)

## PART 187—LICENSING

### Subpart 187.15—Renewal of Licenses

1. Section 187.15-1 is amended by adding paragraphs (c) and (d) reading as follows:

**§ 187.15-1 Requirements for renewal of license.**

* * * * *

(c) Every Officer in Charge, Marine Inspection, shall, before renewing an existing license to an Operator or Ocean Operator who presents evidence of having served under the authority of his license within the three years next preceding the date of application for renewal, or who has been employed in a position closely related to the operation of vessels during the same three year period, require that such operator present an affidavit that he has reviewed within the three months next preceding the date of application, the Rules of the Road applicable to the waters for which he is licensed, and demonstrate his knowledge of the application of the Rules of the Road.

(d) Every Officer in Charge, Marine Inspection, shall, before renewing an existing license to an operator or ocean operator who has not been employed on the waters for which he is licensed, or who has not been employed in a position closely related to the operation of vessels during the three years next preceding the date of application for renewal, satisfy himself that such licensed operator is thoroughly familiar with the Rules of the Road applicable to the waters for which the applicant is licensed. A written examination may be required for this purpose or the applicant may be examined orally and a summary of the oral examination placed in the operator's license file.

**§ 187.15-5 [Amended]**

2. Paragraph (a)(5) of § 187.15-5 *Application for renewal,* is canceled. (The revised text has been transferred to § 187.15-1(d).)

(Sec. 3, 70 Stat. 152; 46 U.S.C. 390b. Treasury Department Order 167-20, June 18, 1956, 21 F.R. 4894)

Dated: May 28, 1964.

E. J. ROLAND,
*Admiral, U.S. Coast Guard,*
*Commandant.*

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